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ORIGINAL ARTICLES

BLADDER TROUBLES IN WOMEN.

By A. Lapthorn Smith, B.A.,M.D.,M.R.C.S., Eng.

Surgeon-in-Chief of the Samaritan Hospital for Women and Surgeon to the Western General Hospital, Montreal. Professor of Clinical Gynecology in Bishop's University, Montreal, and Professor of Surgical Diseases of Women in the University of Vermont, Burlington. Gynecologist to the Montreal Dispensary, and Consulting Gynecologist to the Womens' Hospital.

Quite a number of the patients who are sent to me by medical friends in the city and from the surrounding country, are women who are suffering from severe and prolonged diseases of the urinary tract. These diseases include disorders and displacements of the kidneys, and inflammatory conditions of the ureters, bladder and urethra. They have all, without exception, caused their physicians a great deal of trouble and anxiety, and were I to transcribe the notes which were furnished to me, together with those taken by myself, a fair sized volume would be required, instead of a short paper, which is all that is intended at the present time. Some of these cases were exceedingly serious, such for instance as one of hydronephrosis, sent to me by Dr. Dostaler, in which the right kidney was as large as a seven months' pregnancy and which on removal by abdominal section was found to contain many large uric acid calculi, one of which had blocked the ureter. This patient made an excellent recovery and has had several children since. Such also was a lady sixty-four years of age sent to me by Dr. Aubry, from whom I removed a sacculated kidney as large as a man's head, in August, 1891, and who is now in good health, at the age of seventy-five. The cases of displaced right kidney were serious enough to require fixation of the organ in most of them, on account of the kinking of the ureter which caused an intermittent hydronephrosis accompanied with much pain and many reflex symptoms. I have also had a good many cases of vesico-vaginal fistula, although the very bad ones, in which a piece of the base of the bladder has sloughed away, are becoming more and more rare, because the general practitioners throughout the country are much better educated than formerly and no longer allow the head to remain wedged in the pelvis long enough to cause sloughing. One of the worst of these cases was sent to me by Dr. Virolle of Montreal, who, while delivering a very fat and flabby woman of forty of a very large child, had the misfortune to tear through the cervix and vagina and bladder. The opening, when I first saw it,was large enough to admit the four fingers,or indeed, the hand, and yet this patient was completely cured by a very simple operation at her own home. It has been described in full in the Philadelphia Med. Journal, but I might say here, that the operation consisted in separating the uterus from the vagina and bladder just as though I were going to perform vaginal hysterectomy. By doing this, I found three different tubes or canals each having a tear to sew up. Little or no denudation was required as the process of separating them was sufficient to denude the edges of the tears. The one in the uterus extended up on the left side much higher than the internal os and yet it was quite easy to sew it up with a running catgut suture. The tear in the bladder about three inches long, was then taken in hand and was closed by a running catgut suture, which never penetrated the bladder and did not even come nearer than a tenth of an inch of the edge of the tear, but when the catgut was drawn tight there was a thickening or ridge where the muscular wall of the bladder on each side was drawn in appo-

sition, and the mucous membrane, though not sewed, was pushed together just as closely as if it had been stitched, while, at the same time, the place of the tear had now become the thickest part of the organ. The vagina was then closed by interrupted silkworm gut stitches which were passed in the following peculiar manner. They took in first the left side of the tear in the vagina; then about an eighth of an inch of the bladder muscle and then the right edge of the vaginal tear. Thus in no case did the lines of suture come opposite to each other. The bladder was tested with boiled milk and not a drop came through, even before the second row of stitches was placed in the vagina. After the vagina was closed before a drop of urine could escape it would have had to get through the first line of defence at the thickened union, and then it would have to pass between the valve like passage of half an inch tightly pressed together and then to escape from the firmly closed vagina. The silkworm gut stitches were removed in ten days by the scissors, guided by the sense of touch, and the woman has been well since. In all cases of vesico-vaginal fistula the self-retaining glass catheter should be left in for the first few days. We all know how soothing absolute rest is to an overworked and excited organ, and for this reason I sometimes fall back upon the last resort of making a vesico-vaginal fistula in order to prevent the bladder from having anything to contract upon, for a few months. Although the patients at once feel great relief from the constant desire to pass water, yet the remedy is a very uncomfortable one and we should exhaust all other measures before resorting to it. I believe that the small glass self-retaining catheter will accomplish all that a button holing of the bladder will do, and if we attach a piece of the thinnest and lightest rubber tubing to the end of the catheter to convey the urine into a chamber, under the bed, the patient will experience very little discomfort while the bladder is put at perfect rest. The case above mentioned, as well as many others, in which I have had the patient keep in a self-retaining catheter, has proved to me that she hardly knows she has it in. Perhaps the most interesting case requiring operation was a woman with uretero-vaginal fistula who underwent several plastic operations on the vagina by other operators in England, as well as by myself, without avail, and in which I was obliged to cut off the ureter above the place where it had been torn during a severe labor, and transplant it into the top of the bladder. This patient made a good recovery after having been in a miserable condition for more than two years.

One of the dangers as well as causes of failure in this operation, is the infection of the wound from poisonous urine. In order to avoid this danger I placed the patient on a comparatively new remedy, urotropin, whose value I wish to take this opportunity of emphasizing. It was very successful in rendering the urine aseptic in this as well as in several other cases in which I have tried it. In some of the cases the urine had never been wholly free from microbes and mucus and pus until urotropin was used. I generally give it in doses of seven and a half grains or half a gramme. Its *modus operandi* is that it is decomposed into formalin and ammonia and thus serves a double purpose, formalin being one of the most powerful germicides that we can safely use in the human body, and the ammonia helping to diminish the acidity which is one of the most troublesome factors in the causation of cystitis. I have noticed in all the cases in which I have used it, that not only was the urine rendered clearer, but also much lighter in color, and the brick dust deposit of uric acid ceased to be thrown down. This, however, brings me to the main object of this short paper, and that is, to point out that many of the diseases of the kidneys, ureters, bladder and urethra are in the beginning solely and entirely due to the hyper-acid condition of the blood and to the concentrated condition of the urine. Any man or woman who allows the urine to be-

come habitually so concentrated that it throws down a brick dust deposit of uric acid and urates on cooling, is not only almost certain to have nephritis, but also uretritis, cystitis and urethritis, to say nothing of rheumatism and endocarditis and endarteritis. Whether in these three last diseases it is essential to have the presence of a specific microbe or not,I do not know, but I do feel certain that no matter how many of these microbes one may have, he cannot get any of these three diseases, if his blood has *no more nitrogen in it than he is able to convert into urea.*

Many women have come to me complaining of a dull burning pain which they describe by placing their finger on each side of their back and drawing it downwards and forwards, plainly tracing the direction and location of the ureters. These patients cannot hold their water for longer than an hour or two, and when they pass it they say it burns them. On examining the orifice of the urethra we generally find some little red caruncles; in fact quite a number of patients have been sent to me by other physicians for the purpose of having this swollen and painful urethral orifice removed by the knife or actual cautery. This I have only had to do in one or two per cent. of the cases, all the others having been quickly cured by means of only two remedies, namely, water and bicarbonate of soda; combined of course with such changes in the diet as would reduce the nitrogen to a minimum and such changes in the mode of life as would increase the inspiration of oxygen. One patient consulted me because she only made water every three days; but on examination this was found to be due to the fact that she only drank enough to supply the needs of the perspiration, respiration and defecation. Being a curate's wife and a very small eater, she had no uric acid and no scalding of the urinary tract. When the importance of drinking water was explained to her she drank and passed as much as any one else. I am convinced that if women drank enough water there would be no such thing as stone in the bladder, stone in the kidney or stone in the gall bladder. People might even continue to eat three times as much as they require, as most people do, and to do three times less physical work than they should, and still be saved from the consequences of their folly if they would drink enough water to wash the half burned products away. I find it extremely difficult to induce patients to drink sufficient water for their actual needs, so that I am obliged to resort to such stratagems as ordering them to drink forty ounces of flaxseed tea, or to order a mixture containing ten grains of bicarbonate of potash to the dose, a dose to be taken every three hours in a tumbler of weak lemonade, thus getting into them considerably over a quart of water in the twenty-four hours. Others again who are weak from over feeding and who will not take a drop of water because it contains no nourishment, I can easily persuade to take a cup of beef tea every three hours; this of course has no value as a food but is of great benefit on account of the water, which it chiefly is. If we could get our patients to obey us blindly the best kind of water for bladder troubles is rain water, but if that cannot be obtained, then plain water from the tap is generally fairly pure. In Montreal the water from the Ottawa river contains some alkali due to the ashes of the burned forests being washed into it, and is therefore especially suitable for bladder diseases. I have found it much easier, however, to induce the wealthier patients to drink Apollinaris or Radnor water which contains a little bicarbonate of soda, or artificial Vichy water made by Charles Gurd, containing bicarbonate of potash and which is both pleasant to drink and very effective in reducing the acidity of the urine. It is quite the exception for me to employ washing out of the bladder, although I do it occasionally, using a solution of boracic acid with a fountain syringe. In chronic cases I dilate the bladder, that is to say, if the patient has to pass water as soon as she has two ounces in the bladder I would make her hold three

ounces of boric solution the first time and increase the amount steadily every day an ounce or two until she could hold a pint. This I know is contrary to Sir Henry Thompson's teaching, and while I think he is one of the wisest surgeons who has ever lived,I believe he is mistaken on this one point. By gradually distending the bladder the mucous folds are flattened out and cleaned and at the same time the contracted muscles are stretched and weakened, so that they cease to resent the presence of a few ounces in the bladder. There are two other conditions which give rise to bladder troubles and I have had several hundreds of each kind under my care. In one the neck of the bladder is irritated by the pressure against it of the cervix of the retroverted uterus. This trouble is promptly relieved by replacing the displaced womb; the second is due to cystocele or prolapse of the bladder and anterior vaginal wall. The condition is caused by laceration of the perineum thus taking away the natural support of the bladder and the result is that the bladder is never entirely emptied. As in the residual urine of enlarged prostate the old urine sets up fermentation in the fresh secretion and decomposition is always going on. All these cases were cured by an anterior and posterior colporrhaphy. There are many other interesting cases I would like to mention, but this paper is already long enough so I must reserve the others for a future communication.

248 Bishop Street, Montreal.

TETANUS AND VACCINATION.

By C. S. Caverly, M. D., Rutland, Vt.
Pres. of the Vt. State Board of Health.

The recent reports of cases of tetanus in connection with vaccination at Camden, N. J., and elsewhere, has called the attention of the profession, in an unpleasant way, to the relation which this disease bears to the practice of vaccination. If there is any connection between the disease and this practice it must be in one of the following particulars:

First,—the serum employed must be infected, or Second,—the operation must be faulty in technique, or Third,—the resulting wound must be neglected.

Although tetanus is usually described in the books as a "traumatic infectious" disease, yet the term "idiopathic tetanus" is still used. However, if the disease bears any relation to vaccination it must be by means of the trauma of the operation: so one of the three suppositions mentioned above must be correct.

The distribution of tetanus germs seems to be rather vaguely known. They are known to be plentiful in the soil, especially such as has been manure-enriched. They are found in the discharges of both men and animals infected, and generally in dirt. They are supposed to live in dust-laden air, and they retain their virulence for a long time. The character of the wound of entrance to the human body may be severe or trivial. The disease follows in the wake of war, and of the Fourth-of-July; it affects new-born babes and puerperal women; it may come with a compound fracture or with a pin prick. So it is easily understood that an operation so simple as vaccination is usually esteemed, might lead to this infection.

The cases of tetanus that have occurred recently in connection with vaccination have naturally been carefully studied. From the facts at hand it is possible to gain a somewhat accurate idea as to the cause, and in a way fix the responsibility.

First, with regard to the quality of the virus. It appears that the cases have occurred with the use of various makes. Henry Mitchell, M. D., Secretary of the New Jersey State Board of Health, states that laboratory examinations of vaccine used in Camden show that no tetanus bacteria are present. Drs. Ross and Feetze, of Cooper Hospital, made inoculation experiments on susceptible animals,with vaccine purchased at fifteen different pharmacies in Camden, with negative results. These facts alone would seem to dispose of any sus-

picion that the virus was responsible. If anything were lacking, it might be the length of time that invariably elapsed between the operation and the development of the disease. And in this connection we may mention the second theory on which these cases might be explained, viz. some fault in the operator's technique. It is supposed that failure to do this operation with due antiseptic precautions might work the mischief. The period of incubation of tetanus is apparently variable. Most authorities, however, rate it at a time varying from a few hours to fifteen days. It is further stated that the earlier the symptoms the more severe, usually. Every case of this disease, so far as I can learn, that has occurred after vaccination, has shown the first symptoms at least nineteen days after the vaccination. The disease has seemed to be of a very virulent type, and such as is expected to appear promptly after infection. These facts alone dispose quite certainly of the theories that either the virus or the carelessness of the operators was responsible for this outbreak. We have left, then, the third supposition, viz. neglect of the vaccination wound. During an outbreak of small pox or when one is threatened, the practice of vaccination is carried on in a wholesale way, physicians frequently being found to take the contract to vaccinate large numbers of people—as for instance, schools or corporation employes, or even the public generally—at a figure that precludes the possibility of after-care or even of giving the persons vaccinated specific instructions as to the care of the resulting sore. We all know the results: the pustule is frequently scratched or the scab removed by germ-infected fingers, some one of the numerous shields is worn for weeks imprisoning the discharges, or a large slough separates, leaving an ulcer exposed to germ-infected air. With our present imperfect knowledge of the distribution of tetanus germs; we can only reason by analogy. It is entirely within the bounds of reason to infer that such sores may become the seat of infection. That this is the explanation of these recent cases is generally believed by disinterested investigators. Either this has been the case or the outbreak has been purely a coincidence.

In this connection it is interesting to note the result of an investigation of one of the two fatal cases of tetanus that occurred in Burlington, Vt. The facts, as given me by Dr. H. R. Watkins, Health Officer at the time, are briefly: Mary E. R., 12 years, was vaccinated October 2, and developed tetanus October 21. Several days prior to the latter date, and with a large ulcer at the site of the vaccination, this girl assisted in taking up and potting plants from the garden. Dr. B. H. Stone, Bacteriologist at the State Laboratory of Hygiene, made cultures from six samples of soil taken from various streets, alleys and gardens of the city, and, from that taken at the residence of this case, developed a pure culture of the tetanus bacillus, which killed white mice in several hours. The animals developed typical tetanic spasms.

The occurrence of tetanus subsequent to vaccination is always, and for many reasons regrettable. It is especially unfortunate just now, when the need of general vaccination is so obvious. Small pox is now more prevalent through the country than for many years, and the occurrence of these cases of tetanus in a few widely scattered places handicaps the health authorities everywhere. The wide publicity given the matter by the newspapers naturally alarms the public, and those industrious foes of humanity, the "antis," are not slow to utilize such a spectacular argument. Sufficient answer to any argument which these cases may supply against vaccination in general, should be found in their fewness compared with the number of vaccinations made during the past three years. Several millions of vaccinations made in this country have furnished, perhaps, twenty cases of tetanus. The U. S. Army authorities state that out of 860,000 vaccinations performed on a susceptible and generally unvaccinated Porto Rican population, only one

death occurred from tetanus. Tetanus, however, is a very common and fatal disease on that island, causing no less than 3.41% of the mortality in seven months, from Oct. 1st, 1899 to May 1st, 1900. The President of the Philadelphia City Board of Health states that out of at least 700,000 vaccinations done in that city during the three months ending with November 1st, presumably under much the same atmospheric surroundings and the same makes of serum as prevailed in Camden, and at the same time, not a single case of tetanus was reported.

Out of the discussions of this subject to which this occurrence has given rise, will surely come one useful lesson. That is, that vaccination is a surgical operation. It is an operation that requires all the attention as to details of cleanliness and asepsis of a larger one. It furthermore emphasizes the fact that the operator's duty does not end with the inoculation—that there is an after history to every "take;" that each should have intelligent after-treatment. This should include daily bathing in an aseptic wash, and renewal of an aseptic protective, until the scab falls. The profession should profit to this extent from this experience. It should frown on any attempt to belittle the importance of scientific care in everything pertaining to the operation, and should strenuously resist any seductive request to make wholesale prices on large orders. Such lapses of professional conduct will surely lead to repetitions of the recent experiences, and in the end to public disaster, through bringing vaccination into disrepute.

A late remedy for seasickness is taking several long breaths in rapid succession. This occasions superoxidation, and long ago was employed to produce momentary anesthesia, even to allow the extraction of teeth. The rapid breathing should be continued until the face reddens.—*Alkaloidal Clinic.*

GUNSHOT WOUNDS OF THE ABDOMEN. *

By Henry Janes, M. D., Waterbury, Vt.

This paper is presented, not so much with the expectation of telling my hearers a great deal that is new in regard to gunshot wounds of the abdomen, as in the hope of starting discussion and getting the experience of those present who had to do with such wounds during our late war with Spain, so that we may fairly judge whether or not since the days of antisepsis, their mortality has been appreciably lessened in military surgery. In civil practice undoubtedly improvements have been made in the treatment of incised abdominal wounds, for if made by sharp, clean weapons, and kept aseptic, they have a tendency to heal without suppuration; the main danger, aside from hemorrhage, being from escape of the intestinal contents into the abdominal cavity.

Gunshot wounds generally heal in a different way, for if caused by large or moderately sized bullets, moving with great velocity, the track of the wound is so bruised that it is almost certain to slough out more or less and by the end of two or three weeks a wound which at first would have hardly admitted the little finger, may have become large enough to readily take in the thumb.

Ordinarily this sloughing is a purely local matter, having nothing to do with constitutional causes, occurring in robust persons in the prime of life as well as in the more debilitated, and is generally sharply limited to the tissues severely bruised by the impact of the bullet, having no analogy to hospital gangrene, as I have lately seen asserted in a prominent city newspaper. However, so long as the wound is open, it is liable to become infected, if exposed to the contagion of hospital gangrene.

No healing takes place until the necrosed tissues have come away, but it is bad policy, generally, to convert the wound into an incised

* Read at the 88th Annual Meeting of the Vermont State Med. Society.

one by attempting to cut away all the bruised flesh, and it is still worse to close the wound or in any way delay the discharge of the putrilage.

At one time during our Civil War a surgeon advocated,and in a considerable number of cases practiced, what he called "hermetically sealing" penetrating gunshot wounds of the chest. The results were not encouraging, being less favorable than in cases treated in the ordinary open way. According to the records, when early death did not take place, all the wounds opened and discharged freely.

If a bullet perforates the clothing, it is likely to carry septic fragments into the wound, and no sound healing can come about until they are expelled by the suppurative process, sometimes a matter of months.

In order to account for all the post mortem appearances reported in President McKinley's case, it is not necessary to assume that the bullet was poisoned or even more septic than bullets usually are when covered with grease which has become rancid. In nearly every war since my recollection, the charge of poisoned missles has been made by persons unfamiliar with the progress of gunshot wounds.

Wounds made by old-fashioned round bullets, from smooth bore muskets, especially if nearly spent, by small calibered pocket pistol bullets and, it is said, by the elongated, hard projectiles of the modern small calibred rifles, which are more likely to preserve their shape, and do not greatly bruise and displace the tissues, can much better be kept aseptic and oftener heal without suppuration than did those made by the large, lead minie bullets almost exclusively used during our Civil War, which generally became mushrooned or deformed on striking, and consequently made large and jagged wounds.

In penetrating gunshot wounds of the abdomen, considering the almost inevitable sloughing of the bullet track, which cannot be prevented by any operation legitimate in the present state of surgical science, it is evident that the danger from peritonitis and other septic infections is not eliminated by merely sewing up the perforations in the stomach and intestines, and that until the sloughing is completed, a favorable prognosis is unwarrantable.

The amount of tissue to eventually slough cannot ordinarily be distinguished by the eye for some time after the reception of a gunshot wound. This is particularly the case when bones are involved. A bullet passing near a bone and merely, so far as can be seen at first, grazing the periosteum, may cause necrosis to a considerable depth in the hard parts or a chronic ostitis in the cancellated portion. Some points mentioned were exemplified in the following case reported somewhat in detail:

On the 18th of February, 1899, about 7 o'clock in the evening, in company with Dr. Grout, I saw Fred Murphy, a tall, robust man of 24 who had been shot an hour before. We found him sitting in a chair supported by attendants. He had just vomited and looked quite pale, though he did not show the ordinary signs of severe shock. He rose up with little assistance and walked into another room, but was unable to lie down on his back on account of difficulty of breathing. He could, however, lie partly on his face, in which position chloroform was administered.

The bullet had entered the left side of the line of the back fold of the arm pit, 1-7 inch from the nipple, between the 9th and 10th ribs, passed slightly upwards and forwards chipping from a rib as it passed out from the cavity of the chest, a narrow splinter about 1-16 of an inch by ¾ inch which lodged, together with the bullet, just outside the rib under the muscles on the right side, 4 inches from the nipple, having passed between the 6th and 7th ribs. If the bullet took a straight course through the body, it should have wounded the spleen, stomach, liver, diaphragm and lower part of the right lung, the parts of the organs wounded depending somewhat on the emptiness or distention of the stomach with food or gas and the curvature of the diaphragm as varied by inspiration or expiration. There was no crepitus or expectoration of frothy, bloody mucous, but just before we arrived he had vomited a dark fluid containing "coffee ground matter," evidently altered blood, but no clots or fresh blood. During our stay he vomited twice more a similar fluid. The altered blood probably did not exceed 2 or 3 oz. in all.

There was not much tenderness of the abdomen or tympanites.

He was chloroformed, and the bullet and fragment of the rib were removed through an incision 2½ inches long.

There was no sign of any escape of the intestinal contents into the abdominal cavity, and as the stomach was empty it was hoped that adhesions would quickly form. We thought that an abdominal section extensive enough to meet all the indications, would be more likely to cause death on the table than to increase his chances of recovery.

Second day. At the morning visit Murphy was found sitting in a chair, unable to lie down without discomfort. He had some pain and tenderness under the right shoulder blade; some fulness and tenderness over the stomach, but no marked tympanites; countenance bright and face not at all pinched but rather pale. Pulse 110; temperature 102. He had slept but little during the night, but after a hypodermic injection of ¼ gr. of morphia, became comfortable, and was found at the evening visit sleeping quietly, propped up in bed. He had not vomited since morning and had no cough, or crepitus over the lungs; no tympanites, but some tenderness on the left side of the abdomen. Pulse 114, respiration 32, and considerable thirst.

Third day. Considerable pain about the chest and left side of the abdomen in the morning. Tongue clean; no vomiting; no great amount of tympanites, but some hardness on left side of the abdomen; wounds looking well. In the morning, pulse 114, temperature 102; pulse 130 and temperature 102½ in the evening. Both Dr. Grout and Dr. Hooker, who visited him with me, thought that a laparotomy would lessen his chances.

Fourth day. During the night he had four passages from the bowels, and felt decidedly more comfortable in the morning, with less tympanites, hardness and tenderness over the abdomen. Tongue clean and some desire for food. There was no great tenderness on upward pressure below and in front of the liver, no jaundice or increase of cough. Temperature 101½, pulse 116.

Towards noon his face became flushed, his respiration catching, and the lower part of the right side became uneasy and sore. At the time of the evening visit the pain in the lower part of the right lung had become aggravated, and there was some dullness, but not much crepitus. The abdomen was harder than in the morning, but not very tender. Respiration 60 and catching, pulse 130 and temperature 101¾.

Fifth day. The patient was quite comfortable. Respiration 32, temperature 101¾, pulse 112. Bowels less tense and less tender, and no great tenderness over lower ribs. Some crepitus over the lower part of both lungs, but no bronchial breathing. Not much thirst and considerable desire for food. Had had several dark fluid, but not particularly offensive discharges from the bowels. Tongue clean, but a little dry in the middle. Dressed the wounds; that of operation having healed by first intention for about ⅔ its length; took out the sutures. The entrance wound looked healthy with no suppuration or granulations.

Sixth day. Murphy had a nervous and restless night. At the time of the morning visit his face was considerably flushed, and he had some pain and tenderness on the left side. His tongue was clean, and he had considerable desire for food. Not much thirst. Temperature 100; pulse 110; respiration 38 and not so catching as the day before, but rather more cough and expectoration. The physical signs did not indicate any increase in the area of the inflammation of the lung. There was very little tympanites or tenderness over the abdomen or lower ribs on the right side, but rather more on the left lower ribs.

Seventh day. Murphy passed a comfortable night, and at the time of the visit, was lying flat on his back, instead of being propped up on several pillows as he had been at the time of the former calls. Temperature 101, pulse 110, respiration 38. Tongue clean, but rather dry in the middle. Has eaten some toast, and drank about 2½ tumblers of milk. Had no tenderness over abdomen, pain on left side all gone but considerable uneasiness of the right side. Fluid nearly gone from left pleura, but increased in the right and confined to the back by adhesions, there being none in front or in the axilla. Respirations less catching. No suppuration of wounds. Had had a discharge from the bowels after several attempts, in which the straining was not painful.

From the seventh day, except an occasional slight jaundice, there was no very marked change in Murphy's symptoms until the eleventh day, when being ill myself, I requested Dr. Grout to take charge of the case.

I saw Murphy with Dr. Grout on the 16th day and again on the 19th day, at which latter time Dr. Grout aspirated the right pleural cavity in the back and removed a small quantity of pus.

Arrangements having been made for sending Murphy to the Mary Fletcher Hospital, I saw him at Dr. Grout's request on the 22nd day, before he was to start. Just before my arrival

he began to expectorate stinking pus to the amount of several ounces, which showed that the pus in the pleural cavity had made its way into a bronchus. This free expectoration, although relieving the breathing, did not much lower the line of dullness in the back.

On the 27th day I saw Murphy for the last time during his life. He was spitting foul smelling pus freely and the line of dullness had gone down some 2 inches since he left Waterbury. There was no flush on his face but his fever, pulse and rapid respiration kept up and he had lost flesh and strength since his admission to the hospital. He died on the 42nd day after the injury.

The post mortem examination was made in the evening of April 1st, the weather being cold. Rigor mortis pretty well marked. Body considerably emaciated. Skin pale with no yellowish tinge perceptible by the electric light. Entrance and exit wounds healed, but owing to the emaciation, the measurements from the nipples were somewhat less than those taken at first, the entrance wound being 6 inches from the left nipple and the exit wound 3½ inches from the right nipple. The incision made to drain the right pleural cavity, measuring 2 inches by 1½ inches, showed no signs of healing and had dark and sloughing edges. The bullet entered between the 9th and 10th ribs, passed upwards and a little forwards through the spleen, stomach, liver, diaphragm and lower part of the right lung, emerging from the chest between the 6th and 7th ribs. The omentum was stuck to the intestines and left wall of the abdomen, forming a sack, which contained a small quantity of grayish odorless fluid, and the surrounding intestines were slightly adherent. Small intestines were nearly empty, collapsed and dark colored. Large intestines moderately filled with foeces. Bladder empty. About 4 ounces odorless pus in the pelvis. The spleen weighed 14½ oz, was somewhat firmer than usual, and was perforated by the bullet 1 inch from front, midway between the top and bottom. No abscesses or infarctions, and wound apparently healing. The stomach contained several ounces of partially digested food. In the greater curvature, 4 inches from the œsophagus, was a wound large enough to admit the tip of the little finger. There was a similar opening in the lesser curvature 3 inches from the œsophagus. These wounds in the stomach were so closed by adhesions to the liver and intestines as to prevent the escape of its contents until disturbed by the autopsy, when the fluid contents partly ran out into the left pleural cavity.

The liver weighed 4¾ pounds. The lobus Spigelii and adjacent part of the left lobe were broken down along the track of the bullet, which passed upwards and to the right about ¾ of an inch from the posterior border, emerging on the upper surface of the right lobe. The upper end of the liver wound had healed for about ¾ of an inch, but below that point the track of the bullet was open and filled with broken down tissue to the amount of ½ oz. The wound in the diaphragm just above the liver, had healed firmly. The right lung was adherent to the walls of the chest on the back side. The lower lobe was inflamed and partially broken down. Weight 20 oz. Left lung attached to costal walls behind; lower part congested but not broken down. No fluid in the pleura before the stomach was disturbed; weight of lung 18 oz. Exit wound between 6th and 7th ribs, healed.

None of the other organs of the head, chest or abdomen contained abscesses, infarctions or signs of pyemic, inflammatory or other disease, and nothing was found in the post mortem examination going to show that there had been any considerable amount of hemorrhage from the spleen, liver or other wounded organs.

The surgeon called to treat a case of felonious assault should have good authority for any operative interference he may undertake, for if long confinement, permanent disability or death ensue, he may be pretty sure that at the trial it will be claimed by the counsel for the defence, that the result was caused by the operation rather than the original wound; so before considering the sins of omission and commission, and criticising the treatment of Murphy's case, it will be well to examine some of the factors which influence results in gunshot wounds of the abdomen, in order that we may have clearer ideas of what we may have to encounter, and how much we may reasonably expect to accomplish by any operative procedures. I should state, that by far the greater part of my experience has been with fragments of shells and missiles, analogous to what are now termed dum-dum bullets, the use of which, at the present day, is prohibited in civilized (if such a term is permissible), warfare, they causing much larger and more lacerated wounds than the bullets covered with hard shells used in the modern small calibred rifles.

The most immediate cause of death in gunshot wounds of the abdomen is shock and hemorrhage from injury to the larger blood vessels, and a large proportion of such cases are found dead on the field, but few of them ever getting into the surgeon's hands. It should be stated that in a hotly contested and great battle, usually a large part of the severely wounded are not got into the hospital until after the lapse of 12 to 24 hours or more.

The next cause of speedy death is the escape of a considerable quantity of the bowel contents into the abdominal cavity, which speedily excites septic peritonitis. The chances of this escape of the intestinal contents are greatly increased, if the wounded man is immediately picked up and carried to a distant hospital in an ambulance, before nature has had time to throw out enough lymph to stich the wounded part to some neighboring organ, or to the abdominal walls, so that any leakage will be prevented or can only occur through the external wound. In a considerable portion of these cases, death preceded by coma or semicoma, occurs in from 24 to 48 hours. Dirty missiles and particles of clothing driven into the wounds, and the before mentioned sloughing debris, may excite septic peritonitis, septicæmia or long continued suppuration, which are the most common causes of late mortality.

It makes a great deal of difference as to results, what part of the intestines is wounded. An Italian physician who made many experiments on animals, found that the escape into the abdominal cavity of stomach contents or bile began to be dangerous when to the equivalent of about 10 grains in a man of ordinary size, while only about ⅛ as much of the duodenal contents, and about 1-32 as much of the contents of the small intestine were needed to produce a similar effect. Gunshot wounds of the small intestines are almost invariably mortal. In the Surgical History of our Civil War it is stated that no case of undoubted wound of the small intestines recovered. This statement is probably too sweeping, for I have notes of the recovery of a case in which for a time there was an escape through the wound of a fluid resembling chyme.

The mortality of wounds of the large intestine is not so great, the contents being generally less fluid, the intestine not so movable, so that adhesions are more likely to occur speedily and prevent any escape of fœces, except through the wounds in the abdominal parietes.

Laparotomies for intestinal wounds done 24 hours or more after injury are very, very seldom successful, and it is extremely doubtful if a wounded man's chances will be improved by such an operation, provided that after the lapse of so much time he is in apparently good condition. If leakage of intestinal contents to any amount has occurred, probably septic inflammation has already been set up and the patient's countenance shows it. If there has been no leakage, there is hope that adhesions have formed which will prevent future oozing.

According to Drs. Senn and Nancrede, all the Americans with perforating abdominal wounds operated on in the Santiago campaign (4 in number) died, while a number at Havana were in a fair way to recovery, at the time the notes were taken, without operation. The Spanish surgeons reported similar results, and I think the English surgeons in South Africa had about the same experience. Two cases operated on at Manilla recovered. I am not aware that the results of such operations, if any, in China have yet been compiled and published. However, it should be borne in mind that recovery after an operation does not prove that death would have occurred without the operation.

The newspapers a few months ago published an account of the case of an English surgeon in South Africa, who being shot through the abdomen, laid motionless where he fell, without taking any food or drink for many hours, after which time he got up and walked several miles until he fell in with a party of his own command who took him to a hospital, where he was apparently recovering at the last reports. In

his case adhesions which prevented the escape of the intestinal contents, i. e. if they were perforated, probably occurred before he got up. His comrade close by and similarly wounded, drank freely, and died where he fell.

In none of these recent reports which I have seen, has any careful diagnosis been recorded of the portion of the intestine injured, so I thought that perhaps some of the members of the Society might be interested in the following brief histories of cases of penetrating abdominal wounds recovering without operation, in a few hospitals under my charge during our Civil War, in which the portion of intestine injured was noted as accurately as possible from the position of the wounds and the character of the feculent discharge.

The number of cases would have been considerably larger if I had been able to have kept copies of the registers of a number of other large hospitals which had to be turned over to another superintendent, or broken up hurriedly on account of some movement of the army.

Judging from the position and course of the wounds, and the character of the discharges, the organs wounded were: the cœcum and ascending colon, 5 times; the transverse colon, 3 times; the descending colon, 6 times; the rectum, 7 times; the liver, 3 times; once in connection with a wound of the transverse colon, and once with a thoracic wound, and the bladder, 3 times; once with a wound of the rectum, and once with a fracture of the femur. Two other recoveries from intestinal wounds were noted without data sufficient to decide the part of the gut injured.

In 10 other non-fatal penetrating wounds of the abdomen, no note was made of injury to the intestine.

The following brief notes are abstracted from the original histories of these cases:

Case I.—J. B. A., aged 28. Wounded by a minie bullet which entered 3 inches above the antero-superior spine of the left ilium, and emerged 3 inches to the right lumbar vertebra. He was also wounded through both legs while crawling off the field on his hands and knees. The anterior wound had healed by the end of the fifth month, but fœces still discharged from the posterior one. Two years after injury the artificial anus had closed, and seven years later he was alive and weighed 150 pounds.

Case II.—G. W. S., aged 18. A minie bullet entered 1 inch below the ensiform cartilage, passed downwards and outwards through the ilium, and emerged on the right hip. Fœces passed through the exit wound for three weeks, but had ceased by the end of the fourth week. Several fragments of bone were removed from the wound. The entrance had healed before the end of the third month, but the exit wound still discharged. A month later he was exchanged convalescent and in good condition.

Case III.—G. B. B. A minie bullet entered 2½ inches above the antero superior spine of the right ilium, and emerged through the ilium 4 inches to the right of the spine, wounding the cœcum in its course. Fœces discharged through the anterior wound for 20 months. Seven and one-half years after injury wounds healed soundly, he was able to work steadily and weighed 192 pounds.

Case IV.—J., aged 21. A bullet entered the right lumbar region midway between the crest of the ilium and the 4th lumbar vertebra, passed upward and forward lodging 2 inches above and a little to the right of the spine of the ilium. The track of the wound was about 8 inches. The bullet was removed on the 16th day. Fœces discharged from the posterior wound for 6 weeks; six weeks later he was transferred to another hospital, cured. He was drawing his pension 9 years afterwards.

Case V.—I. S. B., aged 23. A minie bullet entered 2 inches above the right Pouparts ligament, passed backwards and emerged behind near the crest of the ilium, wounding the gut in its course. Fœces discharged from the anterior wound for about four months, but his general health remained excellent. He was well 8 months from the time of the injury.

WOUNDS OF THE TRANSVERSE COLON.

Case VI.—T. M., aged 18. A minie bullet entered 3 inches to the right of the navel, passed through the abdomen and emerged 3 inches to the right of the joint between the 2nd and 3d lumbar vertebra. The transverse colon and liver were probably wounded, for there were discharges of yellow bile-like fluid, and feculent matter from both wounds for some time. A month after injury the wounds were healing nicely, he had a good appetite and his bowels acted regularly. A month later the wounds had entirely healed, and he was transferred to another hospital, well. Seven months after injury he was returned to duty.

Case VII.—A. J. D., aged 20. A minie bullet entered at the ensiform cartilage and lodged in the abdomen. There was no shock or bleeding. Fourteen hours after the injury, while defecating, the patient heard something hard drop into the vessel which the nurse found was the bullet. In a month he was well and able to walk about the hospital. He was alive and well 7 years afterwards.

Case VIII.—N. G., aged 24. A minie bullet entered at the navel, the patient also had a sabre cut on the head, and the lower extremities were paralyzed. There were fæcal discharges from the wound, and there was great pain and difficulty in passing urine. The wound had healed by the end of the second month but he was still paraplegic and the rectum was partially paralyzed. He was discharged from the service at the end of the 4th month.

WOUNDS OF THE DESCENDING COLON.

Case IX.—A. F., aged 18. A minie bullet entered 4 inches to the right of the navel, passed backward and to the left through the abdomen, wounding the gut and emerged just to the left of the spine, fracturing the transverse process of a lumbar vertebra. Several fragments of bone came away, and at first there was free fæcal discharge from the posterior wound, which, however, gradually diminished and had nearly ceased by the end of the second month, when he was transferred to another hospital, well nourished and apparently rapidly recovering.

Case X.—T. W. C., aged 28. A minie bullet entered 3 inches to the left of the navel, passed through the abdomen and emerged 1 inch to the left of the first lumbar vertebra. The patient soon recovered from the shock and walked to the field hospital. Fæces passed by the posterior wound for 15 days. It is possible that the small intestine was wounded, as at first the discharge was milky or chyle-like. A month later he was in good general health, and suffered no inconvenience from the wounds. At the end of the second month he was transferred to another hospital, well. At the end of the 10th month he was placed in the V. R. C. He died of phthisis about six years after the injury. The artificial anus is said to have reopened, for a time after his discharge from the service.

Case XI.—T. K. C., aged 31. A minie bullet entered the left side half way between the last rib and the crest of the ilium, wounding the descending colon , and passed out behind, near the spine, just above the posterior-superior spine of the ilium. Fæcal discharges from both wounds continued for about 7 weeks when they ceased for a time, the wounds occasionally opened, however, and gave exit to fæcal matter up to the time of his transfer to another hospital, four and a half months after injury. He was reported well four months later.

Case XII.—J. N. P., aged 34. A minie bullet entered just below the left nipple, between the 10th and 11th ribs, passed downwards and backwards and emerged 2 inches to the left of the spine, 1 inch above the crest of the ilium. There was no great shock, and he walked, without assistance, half a mile to the ambulance, which took him 2½ miles to the field hospital. The next day he was taken 17 miles to the base hospital, where he remained a week. A considerable quantity of clothing was removed from the posterior wound during the 1st and 2nd weeks after injury. On the 13th day feculent matter began to discharge from the pos-

terior wound and continued to do so for about 3 weeks. His appetite was fair most of the time. The posterior wound closed in 2 months and the anterior about a month later. He was discharged from the service 5 months after injury in fair health, though somewhat troubled with constipation and variable appetite. He was alive 7 years later.

Case XIV.—E. P., aged 24. A minie bullet entered 3 inches to the left of the first lumbar vertebra and emerged 1 inch above the anterior-superior spine of the left ilium, wounding the gut. The posterior artificial anus was still open 4 years afterwards. Ten years after injury he had applied for an increase of pension, and although it was not so stated, probably the wounds had not entirely closed.

WOUNDS OF THE RECTUM.

Case XV.—F. E. H., aged 23. A minie bullet entered the left groin and emerged 1 inch back of the right trochanter major, wounding the rectum in its course. Fæces discharged from the posterior wound for 2½ months, and from the anterior 3 months; 3½ months after injury the posterior wound had healed, the anterior one being still open, but he was in good general health. For 2 years or more he passed wind by the wound occasionally. He was alive 10 years after injury.

Case XVI.—W. H. A., aged 22. A minie bullet entered 2 inches above and 1 inch back of the right trochanter major, passed through the ilium, across the pelvis, wounding the rectum, and emerged through the left ilium 2 inches outside the left sacro-iliac symphysis. The entrance wound had healed by the end of the 4th month, but fæces still passed through the exit wound. He had very little pain, slept well, and had a good appetite. The wound was discharging 8 months after injury and occasionally flatus passed through the wound as late as 7½ years afterwards.

Case XVII.—W. S. B., aged 18. A minie bullet entered ¾ inch below the left Pouparts ligament, 2 inches from the spine of the pubis, comminuting the horizontal ramus of the bone, passed through the pelvis, wounding the rectum, and emerged through the greater sacro-sciatic notch. Fæces discharged through the posterior wound for some time but gradually ceased and the wound had nearly healed by the end of the 3d month, though the anterior wound was still discharging healthy pus. He was transferred to another hospital, convalescent, about 4 months after injury.

Case XVIII.—J. W. B., aged 18. A minie bullet entered a little above the left hip joint, passed through the ilium, rectum, and sacrum, emerging on the right side, nearly opposite but a little higher than the point of entrance. At first he had great pain in the back part of the pelvis. Micturition was difficult but catherization was not necessary. Suppuration was free. He had diarrhœa, but otherwise did well. The wound had healed and he was able to walk about the ward by the end of the 2nd month. Two months later he was paroled.

Case XIX.—J. L. F., aged 35. A bullet entered the inside of the right buttock and emerged through the left side of the scrotum. Fæces and urine escaped through both wounds, and fæces mixed with urine from the anus. The urine had nearly ceased flowing from the wounds by the 10th day, but the fæces escaped longer. Suppuration was profuse, but the wounds healed rapidly, and by the end of the 5th week, the excretions were voided entirely by the natural channels. He was transferred the end of the 3d month, convalescent, and paroled a month later.

Case XX.—D. K. B., aged 21. A bullet entered the left groin, passed through the pelvis, wounding the rectum, and lodged in the right buttock, from whence it was excised the next day. There was considerable bleeding from the anterior wound, and fæces escaped from the posterior wound for about a week. The wound had nearly healed, and the patient was out daily in about a month. Two and one-half months after injury he was transferred in good general health, but had some difficulty

in flexing the thigh on the pelvis. Ten days later he was paroled.

Case XXI.—J. W. H. A bullet entered the upper part of the right thigh and passed through the pelvis, wounding the rectum in its course. Fæces escaped from both wounds, and the lower limbs were paralyzed. By the end of the 2nd month he was able to walk with a cane, had a good appetite and slept well. He was discharged from the service about six months after injury. Ten years later he had difficulty in retaining his urine and fæces.

Case XXII.—R. N. A minie bullet entered the pelvis near the left hip joint, and passed through the rectum. The left leg was partially paralyzed and became considerably atrophied. He was alive 10 years after.

WOUNDS OF THE LIVER.

One case, that of T. M., was given among the wounds of the transverse colon.

Case XXIII.—W. W. S., aged 25. A minie bullet entered the right lumbar region, passed into the abdominal cavity, and emerged 4 inches below and a little to the right of the navel. The right lobe of the liver was wounded, and fragments of the liver and bile were discharged from the wound. The wounds had healed by the 7th week, but there was great pain in the region of the liver and transverse colon, which continued for 3 weeks longer, more or less. Three months after injury he was transferred, well, and was exchanged about three weeks later.

Case XXIV.—J. B. C., aged 35. A bullet entered the right side immediately over the 10th rib midway between the spine and sternum, passed downwards and backwards, and lodged. The right arm and leg became paralyzed, and there was severe pain in the liver, right lung and right shoulder. There was bloody expectoration, and the patient became jaundiced in less than 24 hours. The cough was severe. He was improving by the 5th week, though the liver was hard and swollen, and the lower lobe of the right lung was dull. In the second month he expectorated large quantities of bile twice, and in the fifth month he coughed up two small pieces of cloth. About 6 months after injury he was discharged from the service, but 6 months later was commissioned in the V. R. C. from which position he was discharged about 4 years later. Four years afterwards he was still alive.

WOUNDS OF THE BLADDER.

Case XXV.—T. L., aged 48. Was wounded by a minie bullet in a kneeling position. The missile entered the front of the left thigh at the junction of upper and middle thirds, passed upward, backwards and inward under the ramus of the pubes and lodged in the pelvis. At first the patient suffered a great deal from disuria. In 3½ months the wound had closed, the general health was good, and there was no difficulty in urination, but he was unable to bear any weight on the left leg. Six and one-half months ofter injury he was discharged from the service. About two years after his discharge he was operated on for strangulated hernia, and about two months later for stone in the bladder, when a large concretion with a bullet for a nucleus, was removed. He had no pension record at the time when these notes were compiled.

The case of J. L. F., with wound of the rectum and bladder, has been given before.

Case XXVI.—R. J., aged 25. Was wounded by a minie bullet, which entered 3 inches above the symphysis pubis, passed downwards and outwards, fracturing the femur in the upper third, and lodged in the outer part of the thigh. The wound had nearly healed by the end of the 2nd month, but he passed semi-solid phosphatic concretions from the urethra, and in the next month a number of calculi, some the size of a pea. At the end of the 4th month he was transferred to another hospital apparently convalescent.

WOUNDS OF THE INTESTINES WITH PLACE OF INJURY NOT SPECIFIED.

Case XXVII.—W. R. W. Was wounded in the intestines on the left side. He was

transferred to another hospital, well, at the end of the 4th week.

Case XXVIII.—J. W. H. Paroled at the end of the 3d month. Condition not recorded.

The great length which this paper has already attained, precludes the introduction of the notes of 10 other recoveries from penetrating wounds of the abdomen in which it was not noted that the hollow gut was opened.

In one of the cases here reported, it is quite probable that the intestine was not opened primarily by the missile, but the opening, which first discharged fæces on the 13th day, was caused by the sloughing.

The artificial ani closed during the first month in five cases, during the second month in four cases, during the third month in one case, during the tenth month in one case, by the eleventh month in one case and during the second year in two cases.

After having been closed for some time, in two cases, the artificial ani opened again.

In four cases, although the artificial ani had closed, the date of closure was not recorded.

In two cases, one at four and one at eight years after injury, the last reports state that there were still occasional discharges of wind or fæces from the wounds.

In none of these cases were any operations performed, except for the removal of fragments of bone or foreign bodies, but the patients were kept quiet as possible and if there was much tendency to peritoneal inflammation, or great pain, opiates were given freely.

In large field military hospitals it is seldom possible to keep accurate descriptions of the wounds proving fatal during the first few days after great battles. Generally the surgeon in charge has suddenly been assigned to a new position, with new details of assistants, often strangers to him and untrained in their new duties. For the first two or three days everything is in confusion, while the wounded are being brought in by hundreds, and every surgeon is doing his utmost to get the amputations and other necessary operations finished before the inflammations set in. The records of the fatalities during this time, generally can be but little more than the names and regiments of the deceased, with the regions of the body wounded. Now, as a very large proportion of penetrating abdominal wounds prove fatal in two or three days, these histories which I have preserved in my note books are necessarily, in a measure, selected cases and consequently worthless for statistical purposes and any mortality percentages based upon them would be misleading. In one small hospital, however, I did, as I believe, keep a record of every wound in my private note book. The hospital was small with only about 175 patients, and after the operations were done, I had no professional assistant. The histories of the early fatalities were necessarily written out mainly from memory after the hurry, incident to organization and the operations, was over, but they are believed to be substantially correct and to account for every wound admitted. Of the five penetrating wounds of the abdomen and one of the pelvis involving the bladder, admitted to this hospital, all but one were mortal. The following is a brief abstract of the records of the fatal cases:

Case I.—An unknown man who was wounded by a bullet which entered behind, passed through the abdomen and lodged under the skin in front. He died the next day.

Case II.—A man, unknown. A bullet passed through the abdomen, from behind, forward. A large quantity of omentum which protuded from the anterior wound became strangulated and was removed without pain or hemorrhage. Date of death not recorded but probably two or three days after injury.

Case III.—A. H., aged 21. A bullet entered just to the right of the spine, wounded the liver and lodged. The patient became very much jaundiced and died on the fourth day.

Case IV.—J. C., aged 30. A minie bullet entered the right lumbar region. He apparently was doing well until the 17th day when

a slight hemorrhage occurred. After several recurrences of the bleeding, the discharges from the wound became colored with bile. He died on the 28th day, having expectorated bile freely for several days.

Case V.—C. J., aged 22. A bullet entered at the nates on the left side, passed forward into the pelvis and wounded the bladder. Urine flowed freely from the wound. The patient died on the 14th day.

According to some of the standard authorities on Military Surgery, the most common cause of death in wounds of the spleen is hemorrhage, mortality 93%; most common cause in stomach wounds, hemorrhage, septic peritonitis, starvation, 75%; most common cause in liver wounds, hemorrhage, septic peritonitis, abscesses, 63%; most common cause in lung wounds, hemorrhage, empyemia, pneumothorax, etc., 65%.

Recurring now to the case of Murphy, it will be seen from the study of his autopsy that there was no septic peritonitis, or inflammation of any abdominal organ, with the exception of a part of the wound through the liver, and that apparently the principal factor influencing the fatal termination, was the unhealthy condition of the wound in the right lung, which was too slight to cause any collapse and which, if it had been the only wound, would not have been benefited by any operation considered justifiable in the present stage of surgical science, and which of course could not be thought of in connection with operations extensive enough to repair the various wounded abdominal organs, viz: cutting in and sewing up the spleen; sewing the stomach; cauterizing or sewing up the track of the bullet through the liver, and sewing the wound through the diaphragm. There was no considerable hemorrhage from the spleen, the stomach contents did not escape to any considerable amount, until the adhesions were torn during the post mortem examination. The liver did not bleed, and it is not likely that sewing or cauterizing the wound would have prevented the breaking down of its tissues. No hernia took place through the wound in the diaphragm and we cannot see how any operation on the lung could have benefitted matters, unless all the tissues bruised and perhaps made septic by the missile had been excised, an operation never yet attempted, to my knowledge, and very much more likely to cause fatal hemorrhage than any permanent or even temporary benefit.

McKinley had a comparatively simple penetrating wound of the abdomen, the openings in the stomach were promptly closed and he had the constant care of several of the most celebrated surgeons in the country, yet the fatal result was not delayed, and at the time of death, nature had made no effort to heal the wounds, the sloughing process not having been completed.

To say nothing of the difficulty of the operation, would the result have been different, except more speedy, if all the bruised tissues had been excised, cauterized and thoroughly antiseptic? At the present time, under the circumstances, would any one but a reckless fool have undertaken such an untried operation, the logical requirements of which would have involved cutting two holes in the stomach, sewing them up, excising the bruised portion of the kidney, suturing it, removing the damaged tissues back of the kidney and draining through the loin?

Will future advances in surgical science ever make such an operation within the abdominal cavity justifiable?

SOME REMARKS RELATIVE TO TWO CASES OF TETANUS FOLLOWING VACCINATION AT BURLINGTON, VERMONT.

By Clarence H. Beecher, M. D., Burlington.

The development of two cases of tetanus in Burlington, following vaccination, and [illegible] currence of a number of cases elsewhere, have shaken faith in vaccination unnecessarily and

caused more or less discussion as to the real etiology of these unfortunate cases of tetanus.

The following facts may aid in dispelling any doubt as to the origin of the cases here, and may show the need of better surgical methods in the performance of vaccination.

First. Only two cases of tetanus developed here in approximately 8,000 vaccinations. The virus used in these two cases was of the same make and from the same supply as the majority of the virus used in the whole 8,000 vaccinations.

Second. The period of time from the vaccination to the development of symptoms in these cases was respectively 19 and 21 days.

The incubation period of tetanus in all reported cases of accidental inoculation, when the instrument producing the wound *was known* to convey infection, has never been more than two weeks and usually between five and nine days.

Third. Neither of the cases had the vaccination wound protected until some time after a scab, which had formed, had been removed, accidentally or otherwise, and then the dressing was done at home.

In experiments conducted at the State Laboratory of Hygiene by Dr. B. H. Stone, in which cultures of the soil were made from the street and localities adjacent to the places where the cases developed, germs were found morphologically identical with the tetanus bacillus *in all the cultures.* After the usual period of growth a guinea pig was inoculated with material from one of the cultures and died in about 30 hours of tetanus. Later, white mice were inoculated with material from the cultures and one died in about 60 hours of tetanus.

The conclusions to be drawn from these facts would seem to be—

First—That inoculation in these two cases did not take place at the time of vaccination but at some subsequent period.

Second—That the germ of tetanus is freely distributed in this section, and

Third—That all vaccination should be done aseptically and the resulting pock should always receive aseptic, and if necessary, antiseptic surgical treatment.

SELECTIONS.

Carbolic Acid; Its Use and Abuse.*

By George W. Sargent, M. D., Seneca Castle, N. Y.

Having seen something of the uses made of carbolic acid by Dr. Seneca D. Powell, and having had an accident in handling it, which would ordinarily have been somewhat serious, but under the circumstances proved to be only an interesting incident, I have attempted what I know is a very incomplete *resume* of its possibilities for good and evil, especially as regards the pure acid, with some remarks on the toxicology and the treatment in cases of poisoning.

Phenol, phenic or carbolic acid, is one of our most interesting and useful remedies. There is none more capable of harm, or more commonly used accidentally and with evil or suicidal intent. It is employed largely and carelessly by the laity, and held in somewhat superstitious regard by many, a few drops of the acid allaying all fears of infection. Every few days we hear of some accident or fatal result from it. It was formerly used as a remedy internally and by injection. It is still employed for the purpose of a preservative in preparations of antitoxin. Considering the large doses of antitoxin now given, an unsafe amount of the acid is liable to be injected, with a very deleterious influence on the heart and kidneys. Dr. George F. Cott, of the University of Buffalo, has shown that the bad results in children attributed to antitoxin, as nephritis and heart failure, are probably due to the carbolic acid.

* Read at the quarterly meeting of the Ontario County Medical Society, in Geneva, Oct. 8, 1901, and published in the *Therapeutic Gazette*, December 15, 1901.

In the *Medical Record* of March 11, 1899, Dr. Seneca D. Powell, of New York, asserts that alcohol is a perfect antidote to carbolic acid; moreover, that in connection with alcohol the acid is capable of greater service than generally supposed. Powell has demonstrated that the pure or 95 per cent. acid may be rubbed on the skin or held in the mouth with impunity until the skin or mucous membrane turns white, if the parts are then rinsed with alcohol, 95 per cent. I am able to testify to the truth of this from experience, having unintentionally performed the experiment already alluded to on my own hands. I had on a table before me two two-ounce bottles labelled and filled respectively with carbolic acid and alcohol. Wishing to rinse my hands in the alcohol I picked up one of the bottles, poured a liberal quantity into one palm, and rubbed it over both hands as in the act of washing. I was not a little surprised to find, by the greasy sensation and the silvery color to which my hands were turning, that I had used the carbolic acid. However, a thorough rinsing in alcohol from the other bottle to my satisfaction promptly restored the normal color and feeling, with the exception of a slight sensation of dryness and roughness for the rest of the day.

Since Powell's paper this antagonism between carbolic acid and alcohol has been made considerable use of in minor surgery and in treating carbolic acid poisoning.

In many instances the pathogenic germ which the physician or surgeon has to deal with is beyond control with the agents at hand in the strengths ordinarily or safely used, but carbolic acid may be employed, with alcohol, in full strength, and by its means a suppurative or an ulcerative process can be checked,and one of healthy granulation produced quickly with rapid healing.

According to the *Therapeutic Gazette* the pure acid is relatively less toxic to the normal tissues than the diluted acid, its penetrability is slight during a brief application, and its bactericidal action surpasses that of corrosive sublimate, from the fact that the action of carbolic acid is not materially affected by the presence of acids, alkalies, salts, or albumin; yet in some cases may be thereby considerably increased. Anthrax spores are destroyed by two per cent. carbolic alone in thirty days, but by two per cent. carbolic with one per cent. hydrochloric acid in seven days; staphylococcus pyogenes aureus by carbolic alone in five minutes, but by one per cent. carbolic with twenty per cent. common salt in one minute.

One of the most speedy and satisfactory methods of treating an indolent ulcer of the leg is carried out in the following manner:

1. Curette and remove all unhealthy and false tissue.
2. Apply 95 per cent. carbolic acid for a moment till the surface turns white.
3. Apply 95 per cent. alcohol till the normal color of a clean granulating surface appears.
4. Protect the ulcer with a covering of short narrow strips of simple adhesive plaster applied criss-cross so as to leave little gaps for drainage.
5. Over this lay plain gauze.
6. Apply one or more roller bandages.

This dressing applied as often as necessary will result, I have found, in a rapid cure.

Carbolic acid is serviceable in mammary,tuberculosis, and other abscesses. Here the cavity is first evacuated, then cleansed by irrigation, swabbing, or curetting, and filled or swabbed out with pure carbolic, then with alcohol, and finally again irrigated.

In this way a normal granulating surface may be secured in a surprisingly short time. A. M. Phelps, of New York, uses the pure acid in this way in tuberculous joints. Empyema, cystitis, hydrocele, etc., are amenable to carbolic acid, using a solution of half a drachm or one drachm to the ounce of water, followed with 25 or 35 per cent. alcohol. In the case of hydrocele a quantity of pure acid is injected and allowed to remain without further interference.

Erysipelas is successfully treated by painting the affected surface with 95 per cent. acid, and when the skin turns white, with alcohol. One of our members has told me of treating a case thus, but found it very painful, though effective. Others who have reported cases make no mention of pain. The brief application of the acid to the skin, or to an ulcer or other raw surface, is not painful.

Ivy poisoning is rapidly cured by two per cent. solution, and the lymphangitis that is apt to occur in connection with infected wounds is usually readily controlled by it; also the redness, pain, induration, and other signs of inflammation in caked breast or mastitis. In cellulitis of the hand or foot an injection of pure acid may be made followed with one of alcohol, with a prior injection of cocaine to avert the pain of the needle. The pure acid is used in mastoid abscesses, in septic conditions of the endometrium, ischiorectal abscesses, furuncles, and other conditions. Some persons dread an operation, and will submit to any treatment, though much slower, rather than undergo cutting. With a specially constructed syringe that will follow the sinuous tracks of fistula *in ano* it is possible to accomplish a cure without a knife.

The danger of poisoning should always be borne in mind. The long-continued application of phenol might be accompanied with absorption and poisoning. Death has resulted from absorption through the skin. I may mention the case of an infant seven days old dying from a few drops on the fingers of the nurse. The proper use of the acid does not contemplate usually protracted or continuous applications. Ignorant persons sometimes wrap the fingers or toes with the acid in full strength, or in very strong mixtures, with subsequent gangrene.

There seems to be an opinion that gangrene is apt to occur when it is used on the extremities even in weak solutions, but this is doubtless a very rare result. An instance reported where two brothers, both young men, never ill previously, had gangrene of the fingers following the use of a solution containing only one and seven-tenths per cent. carbolic acid was regarded as due to idiosyncrasy. There is no danger so far as I know from the pure acid followed with alcohol.

The treatment of poisoning cases has been very unsatisfactory. Woodman and Tidy cite twenty-one instances during a period of five years with only one recovery, the doses taken being usually one to two ounces. The smallest fatal dose I have found noted is one-half ounce. The effect of a poisonous dose is sometimes extremely rapid, but usually several hours elapse before death.

The antidotes printed on the manufacturers' labels and in the books have not proven efficient.

The alkalies, sulphate of magnesium, sulphate of sodium, and saccharate of lime, in excess, have some power. Oils retard absorption. Heart stimulants, as atropine, strychnine, and caffeine, are useful. In one instance 2½ grains of caffeine, dissolved in water with the aid of salcylate of sodium, given hypodermically, and repeated in an hour, restored a man from a state of coma. Acetic acid or vinegar is claimed to be efficacious. Bleeding, one pound of blood being taken, was once successful. Emetics are of no service because the stomach is benumbed or paralyzed by the acid.

During the past two years, since the antagonism between phenol and alcohol has been made prominent, several cases of recovery where the patients were apparently moribund have been reported after the exhibition of alcohol. In one case the stomach was washed out with pure alcohol. A 25 per cent. solution will counteract the acid on the skin, and it is probable that whiskey or any strong alcoholic would answer for internal use.

How this antidote property of alcohol is exerted is not certainly known. There may be a true antagonism between the two substances, or the alcohol may act simply as a solvent, though its influence seems to go further than

that. However this may be, we have the fact that alcohol will prevent and remove the caustic and poisonous effects of the acid.

The primary step in poisoning is to wash the stomach out with alcohol; then whiskey may be given hypodermically with the idea of neutralizing the acid in the blood. Other heart stimulants may be required. As the acid is quite rapidly taken up into the blood it has been suggested that no treatment is complete without bleeding, but that has not been done to any great extent to my knowledge.

I find four cases reported during the past eighteen months—three in the *Medical Record* and one in the *Therapeutic Gazette* of September 15. There have been others but I am unable to refer to them at this time. In three of these alcohol was given the undoubted credit for the recovery. In two it was the only agent used until the acuteness of the attack was over. In one sulphate of magnesia was employed, but not considered as having much influence on the case. In the fourth the act of drawing forward the tongue seemed to be beneficial by admitting air to the lungs.

In conclusion, it seems safe to say that alcohol is the most perfect, the most certain, and the most handy antidote to carbolic acid that we possess.

NEWS, NOTES AND ANNOUNCEMENTS

Bennington County Medical Society—The annual meeting of the Bennington County Medical Society was held in Arlington January 8, with representatives present from most of the towns in the county.

Dr. W. S. Phillips, of Arlington, read an interesting paper on "Typhoid Fever." Dr. H. S. Goodall was elected a member of the society.

These officers were elected: Dr. L. H. Ross, Bennington, president; L. H. Hemenway, Manchester, vice-president; L. B. Newton, North Bennington, secretary and treasurer.

Dinner was served at the Hotel Arlington. The next meeting will be held at North Bennington the second Wednesday in March.

Physicians' Fees.—The Holyoke French Physicians' Association has unanimously endorsed a new schedule of fees prepared by the Holyoke Medical Association, which calls for a fee of $2 on the occasion of a day visit and $3 at night. The scale of fees will probably go into effect early in the new year. One of the purposes of the new schedule is to encourage day calls among the people.

The Medical Standard at McGill University will be advanced in the near future, and there is a probability of increasing the term from 1 of 4 sessions of 9 months each to 1 of 5 sessions of 9 months each.

Lamoille County Medical Society.—The physicians of "spunky" Lamoille County at a recent meeting adopted a schedule of prices for professional work and voted to strictly adhere to the same. It was also decided to keep a list of "dead beats" and require cash in advance from all on that list. This action is commendable and will do much to uphold the dignity of the profession in Lamoille County. The physicians who have had the courage to take this stand deserve real commendation and their example should be followed by the members of all other local medical organizations.

THURBER MEDICAL ASSOCIATION.—A well attended and successful meeting of the Association was held at the Crescent House in Franklin, Mass., on Thursday, December 20, at half past three o'clock. This innovation on established usage as to the place of meeting, was thought expedient on account of the fact that nearly all the towns and villages represented in the Association are now connected by one or more lines of electric cars, and meetings can easily be held in any part of the district.

The subject of the day was "Lessons from Experience." On the general topic papers were read by Drs. J. Cushing Gallison of Franklin, W. W. Browne of Blackstone, Wm. L. Johnson of Uxbridge, and J. M. French of Milford. It was in the contract that no scientific information was to be imparted, and the rule was strictly adhered to. With such a prince of story-tellers as Dr. Gallison to lead the way,all the papers were of necessity entertaining, and full of the practical wisdom of a doctor's everyday life.

This was "ladies' day," and the wives and daughters of the doctors were out in force, apparently to enjoy the papers not less than the doctors themselves. Indeed, it has always been found that the frequent presence of the ladies at the meetings of the Association has had a tendency to increase the interest, without lessening the value of the work done from a professional standpoint. In this instance, none of those present were better qualified to appreciate and enjoy the papers read, than were the ladies. Indeed, there is no doubt but that if the doctors' wives could be induced to write papers for one meeting, in which they should relate somewhat of their own experience with doctors and patients, that meeting would be the greatest success of the year. Perhaps we can induce them to try it.

The literary exercises were followed by a dinner, which was made memorable, not only for savory viands and witty conversation, but for the sudden going out of the electric lights, leaving the room in utter darkness.

The next meeting will be held in April.

J. M. FRENCH,
Secretary.

FACULTY OF THE UNIVERSITY OF VERMONT MEDICAL DEPARTMENT.—As an item of interest to the many graduates of the U. V. M. Medical Department to whom this issue will go, we print the names of the new Medical Faculty. Many changes have been made in the *personnel* of the Faculty of Medicine, and the evident desire to increase the facilities of the college is shown by the many new appointments that have been made. Several new courses have been added and many students are availing themselves of the advantages offered by this sturdy old institution.

FACULTY OF MEDICINE.

Matthew Henry Buckham, LL. D., Burlington, Vt., President.

John Ordronaux, M. D., LL. D., New York City, Emeritus Professor of Medical Jurisprudence.

J. Williston Wright, A. M., M. D., New York City, Emeritus Professor of the Principles and Practice of Surgery.

Albert F. A. King, A. M., M. D., Washington, D. C., Professor of Obstetrics and Diseases of Women.

J. Henry Jackson, A. M., M. D., Barre, Vt., Professor of Physiology and Microscopic Anatomy.

Henry Crain Tinkham, M. D., Burlington, Vt., Professor of General and Special Anatomy, and of Clinical Surgery; Dean of the Faculty; Attending Surgeon to the Mary Fletcher Hospital.

James Nathaniel Jenne, M. D., St. Albans, Vt., Professor of Materia Medica and Therapeutics, and of Clinical Medicine.

John Brooks Wheeler, A. B., M. D., Burlington, Vt., Professor of Surgery; Clinical and Minor Surgery; Attending Surgeon to the Mary Fletcher Hospital.

Aloysius O. J. Kelley, A. M., M. D., Philadelphia, Pa., Professor of the Theory and Practice of Medicine.

Horace L. White, A. B., Portland, Me., Professor of Chemistry.

PROFESSORS OF SPECIAL SUBJECTS.

Rudolph A. Witthaus, A. B., M. D., New York City, Professor of Toxicology.

Marshall C. Twitchell, M. D., Burlington, Vt., Professor of Diseases of the Eye, Ear and Throat; Ophthalmologist to the Mary Fletcher Hospital.

Judson E. Cushman, Esq., Burlington, Vt., Professor of Medical Jurisprudence.

Otto H. Schultze, A. M., M. D., New York City, Professor of Pathology.

Ellice M. Alger, A. B., M. D., New York City, Professor of Dermatology.

A. R. Shands, A. M., M. D., Washington, D. C., Professor of Orthopedics.

Walter D. Berry, M. D., Waterbury, Vt., Professor of Diseases of the Mind.

A. Lapthorn Smith, B. A., M. D., Montreal, P. Q., Professor of Surgical Diseases of Women.

Paul Thorndyke, M. D., Boston, Professor of Genito-Urinary and Venereal Diseases.

ADJUNCT PROFESSORS AND INSTRUCTORS.

Patrick E. McSweeney, M. D., Burlington, Vt., Adjunct Professor and Instructor in Obstetrics; Attending Physician to the Mary Fletcher Hospital and Fanny Allen Hospital.

Lyman Allen, A. B., M. D., Burlington, Vt., Adjunct Professor of Physiology and Assistant to the Chair of Surgery, and Instructor in Physiology and Surgery.

Harris R. Watkins, B. L., M. D., Burlington, Vt., Adjunct Professor and Instructor in Practice of Medicine, and Physical Diagnosis, and Adjunct Professor and Demonstrator of Anatomy; Attending Physician to the Mary Fletcher Hospital.

John Gibson, M. D., Vergennes, Vt., Adjunct Professor and Instructor in Materia Medica.

Clarence H. Beecher, M. D., Burlington, Vt., Instructor and Assistant Demonstrator of Anatomy.

David Marvin, M. D., Essex Junction, Vt., Instructor in Materia Medica.

Clifford A. Pease, M. D., Burlington, Vt., Laboratory Instructor in Neurology.

Fred K. Jackson, A. B., M. D., Burlington, Vt., Instructor in Physiology.

Frederick E. Clark, M. D., Burlington, Vt., Instructor in Histology and Pathology.

Joseph A. Archambault, M. D., Burlington, Vt., Instructor, and Laboratory Instructor in Chemistry.

Bingham H. Stone, A. B., M. D., Burlington, Vt., Laboratory Instructor in Clinical Microscopy, and Urinary Analysis.

Everard A. Wilson, M. D., Belfast, Me., Assistant Demonstrator of Anatomy.

H. L. Wilder, M. D., Burlington, Vt., Assistant Demonstrator of Anatomy.

AMERICAN CONGRESS OF TUBERCULOSIS.—

The Executive Committee of this Society has fixed upon the City of New York as the place, and the 14th, 15th and 16th of May, 1902, for the annual meeting of this Association, and extend an invitation to all interested in the prevention of tuberculosis to enroll and to contribute papers to be read. Every indication points to a still more successful meeting than that of last year, and all the Canadian Provinces and the Central South American States are expected to be represented.

Respectfully yours,

CLARK BELL, Sec'y.

New York, Dec. 21, 1901.

A rapid pulse soon after the receipt of a traumatic injury to the brain points to contusion or laceration, rather than to hemorrhage or compression. It must be borne in mind that injuries to the brain, sufficiently severe to prove rapidly fatal, are usually attended by a frequent pulse soon after the occurrence of the injury.—*Med. Times.*

Dr. F. C. Brigham has moved from Salisbury to Jamaica, Vt.

NEW HEALTH OFFICER FOR BURLINGTON.

Dr. W. G. Church has been appointed Health Officer of Burlington, replacing Dr. H. R. Watkins who has resigned.

It is well recognized all over the city of Burlington, by both the laity and the profession, that Dr. Watkins has made one of the most capable and conscientious Health Officers that the city has ever had. Genuine regret is felt at his withdrawal from the position, which is made necessary by an increase of other duties.

The new incumbent, Dr. Church, is a man of ability and force and he will undoubtedly fill the position to the satisfaction of all concerned.

WHAT THE GIRL SAW.

The duties of a certain sea-captain kept him a long time away from home. During his enforced absence his wife had become quite a society lady. So when her husband returned, a recherche reception was given complimentary to him. He had not been drilled in manners and other things esthetic, and did not have clothes suitable for the occasion. His wife finally prevailed upon him to have a full-dress suit made. The style of the trousers and coat was excusable, but he could not see the sense of having the vest cut so low. On the evening of the function, he donned his dress suit and wore a button in the lapel of his coat, the only evidence of his rank and profession.

At the reception, a young lady who had been introduced to him, stood conversing with him and noticed the button in the lapel of his coat. "I see your naval," she said. With suffused and perspiring face, nervously fingering in the region of his umbilicus, the captain stammered: "I told the tailor he was cutting that d——n vest too low."—*Ex.*

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Enosburg Falls, Vt.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

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Burlington, Vermont, January 25, 1902.

EDITORIALS.

SALUTATION.—With this issue the VERMONT MEDICAL MONTHLY begins the eighth year of its existence. To commemorate the fact that the MONTHLY is at last on a paying basis with a large and growing subscription list and an advertising patronage of which any journal should feel proud, it has been deemed wise to assume a new garb, one that will better typify the MONTHLY'S present growth and standing in the field of medical journalism.

It is hoped that the innovations inaugurated with this issue will meet the general approval of the MONTHLY'S many friends, and that its enemies, if it has any, will be generous enough to allow for the honest efforts that are embodied in its new form and appearance.

The path of the VERMONT MEDICAL MONTHLY has not been entirely strewn with roses during the past seven years, and its present standing is the result of a hard uphill fight. There is only one person who will ever know what obstacles, what jealousies, and what counter influences have been met in the MONTHLY'S career. In spite of all, however, the MONTHLY has gone steadily on, free from partisanship or unkind criticism in its policy, and today stands the only medical publication that has ever weathered the blasts of local adverse influences in Vermont, and reached a point where it could really be called a successful medical journal.

OUR EDITORIAL STAFF.—We take considerable pleasure in presenting with this issue the likenesses of those gentlemen who form the editorial staff of the VERMONT MEDICAL MONTHLY. Each and every one have been interested in the progress of the journal and either directly or indirectly have contributed to its success and standing.

PLANS FOR 1902.—A large amount of original matter will be the feature of the Eighth Volume of the VERMONT MEDICAL MONTHLY and especial effort will be made to obtain articles of the utmost practical value to the general practitioner. There is a growing tendency in medical journalism to forsake the common problems of medicine for ultra-scientific topics. This is all right, but the general practitioner has no time for research and laboratory investigation and he cares for these branches only so far as they will enable him to better practice his profession. In other words, he wants the fruit of such special work, but he does not want any of the labor or study leading up to it. He has no time for methods and theories—practical deductions and facts are what he wants. Therefore, recognizing that the general practitioner has a right to what will benefit him the most, we shall endeavor to give a maximum amount of sound practical reading matter, embodying the experience of practical, observing men. Present needs are more important than future ones, and we shall earnestly try to cater to the every day need of the general practitioner, the every day demands of his professional life for practical information.

SOME THINGS VERMONTERS HAVE TO BE THANKFUL FOR.—A State Laboratory, second to none in the world, a competent Board of Health, the equal of any, a State Cattle Com-

mission that does its work, a grand old Univesity of Vermont, an affiiliated Medical Department that stands in the front rank of medical colleges, and brighter prospects for the development of business opportunities in Vermont than ever before—these things we should be truly thankful for.

Some Things Vermonters Have to Regret. —That our climate is nine months Winter and three months late in the Fall, that Vermont has no State Sanatorium for the care of tubercular patients, that Vermont prohibition does not prohibit, and that the men Vermont is proudest of, live and have made their reputations outside of the State,—these things we have to regret.

A Knowledge of Physical Diagnosis Essential to the Successful Practice of Medicine.—If there is any one branch of medical science that the student of medicine should be better trained in than another, it is in the knowledge of physical diagnosis and its underlying principles. Too often the young graduate has been thrown on his own resources with so meagre a knowledge of the physical signs of disease that his professional career has been seriously handicapped from the first. Knowing this it is little wonder that the first five years of a young practitioner's life has been termed "the age of mistakes."

But a change is taking place and all of the leading colleges are training their students more carefully along the lines of physical diagnosis. Practitioners recognizing the trend of progress are developing themselves in this same respect and the result is that the diagnosis of disease was never more accurately made than it is to-day.

The progress of medicine is, therefore, greater than ever before, and with the wonderful development that has been made in the interpretation of physical signs of disease, coincident with an increased knowledge of pathology, medical science is gradually, but none the less surely, approaching a plane where it can be truly called an "exact science."

Tetanus and Vaccination.—In view of the discussion that has been occasioned throughout the civilized world by the occurrence of several cases of tetanus following vaccination, we wish to especially call the attention of our readers to Dr. Caverly's article in this issue. For a brief, sententious scientific consideration of the whole matter, it has not been surpassed by any of the many articles that have appeared in recent medical literature.

Have you a kind word?—In order to give us more confidence in our efforts, and more courage for the immediate future of the Monthly, we hope all those who are in sympathy with us will express their commendation (or criticism) of the Monthly as it now appears. A kind word on a postal card, even, will be of vast help to the Editor and his assistants, and prove that our readers have a normal supply of the "milk of human kindness."

EDITORIAL NOTES AND CLIPPINGS.

We note with satisfaction that the lay press of Vermont are very favorably considering the name of Dr. W. Seward Webb for gubernatorial honors. Few men in Vermont have the interests of the State so closely at heart as Dr. Webb, and should he be chosen the next governor of Vermont, it is pretty certain that the State would reap many advantages.

Dr. Webb is a remarkably clever business man, known for his business worth throughout the length and breadth of our land, and he would bring to the gubernatorial office many attributes that would make him a highly acceptable occupant.

It is certain that Dr. Webb has had exceptional advantages, but it is equally certain that he has made the most of them and instead of letting his great wealth overshadow and dwarf his personality, he has made his individuality and character stand first.

There can be little doubt that his medical training has been of great service in developing his powers of observing and discerning men, and as a member of our profession we should stand by him, if he will accept the honor—which we are not at all sure about. We hope he will, however, for Vermont can do no better.

American surgery ranks as high as that of any country in the world, and in the medical men chosen to attend the late President, America was worthily represented. Success in such a case would have been a triumph, but defeat is not a disgrace.—*British Med. Jour.*

The official report of the Camden, N. J., Board of Health shows conclusively that tetanus was not caused by the vaccine virus employed. A case of tetanus occurred from gunshot wound,during the same period,in a boy who had not been vaccinated, proving that the tetanus germs were in the atmosphere. There is indisputable evidence that the tetanus germs were not introduced at the time of vaccination.

The tetanus cases are to be explained upon atmospheric and telluric conditions which have prevailed in Camden during the past six weeks. There has been a long period of dry weather with high winds, so that tetanus germs, which have their normal habitat in the earth dust, dirt of stables, etc., have been constantly distributed in the atmosphere. It is noticeable in all the cases, after careful examination as to the cause, that the wound had been exposed by the scab being knocked off or removed, or else the arm had been injured and infection resulted; frequently children scratched the vaccinated area with their dirty fingers and nails and infected the wound.

We are glad to see that the report thoroughly exonerates vaccination as a cause of this terrible calamity.—*Medical Times.*

Reciprocity in medicine as well as in politics, is plainly a growing demand. There is, we understand, to be a meeting held soon in Chicago of the executive boards of medical registration from Wisconsin, Illinois, Indiana, Ohio and Michigan, for the purpose of securing the right of physicians to practice in these states that are registered in any one of them. The design is to form a nucleus of the west central States, and to extend the plan to other states. The Michigan law already provides for this reciprocity under certain conditions. Every consideration of justice should lead us to encourage interstate registration, so far and so fast as possible consistent with upholding the standards of medical education and progress. It is at present a great hardship that physicians in good standing in one state are compelled to undergo examination for license to practice when removing to another state or when living near the border line.—*American Medicine.*

MEDICAL ABSTRACTS.

Morphine and Atropine in Cardiac Dyspnoea—Dr. Graham Steel (*Quarterly Medical Journal*), in an article entitled A Present Day View of Heart Disease and Its Treatment, says:

"I will conclude with reference to a treatment that is too often also the conclusion of our therapeutic endeavors, I refer to the relief of dyspnoea and the promotion of euthanasia by the hypodermic administration of morphia and atropia, but do not think there is any throwing up of the sponge when we have recourse to it. Only within the last couple of months I had a patient, with aortic incompetence and complications, in the Infirmary, who seemed not likely to live half a dozen hours, and whose friends had been so informed. His distress

of breathing, etc., was great, and I ordered him a hypodermic of morphia and atropia. He began to improve almost immediately and is now unquestionably convalescent. Every now and again we meet with such a result. Paroxysmal dyspnœa is the symptom that specially indicates the use of morphia, and such dyspnœa is often found to be associated with considerable arterial tension. At first nitrites and alcohol give relief, but later we must have recourse to morphia and atropia. As conditions that militate against the use of morphia, I think much accumulation of bronchial secretion is a stronger contradiction as regards its use than kidney disease. Indeed, some cases of heart failure in Bright's disease derive great benefit from its use and stand fairly large doses, ut the first dose should always be small; one must feel one's way to the dose that brings relief without risk.

One thing is essential for the practitioner who treats heart disease, it is that he should never know when he is beaten while his patient is alive. When his patient is dead, he should at least have the consolation of having fought a good fight on his behalf."

Angina Pectoris.—Nuckols, in an article on Angina Pectoris (*Gaillard's Med. Jour.*, Dec., 1901) says the following in regard to treatment:

The treatment may be divided into two parts: (1) During the attack. (2) During the interval. During the attack, inhalations of amyl nitrite. If these fail use chloroform or ether by inhalation, and, as a last resort, give morphia and atropia hyperdermically. Use hot applications over the region of the heart.

During the intervals. (a) Hygienic and dietetic. Complete change in habits must be advised. Attention should be given to the bowels to see that they act regularly. Avoid excesses of all kinds, particularly of eating and drinking. The diet should be regulated so that no digestive disturbances shall arise. Instructions should be given to avoid excitement and violent exercise.

(b) Medicinal. Nitroglycerin should be given in full and increasing doses. If degeneration of the arteries or any tendency toward rheumatism be evident, iodides should be given in full doses, extending over long periods, but always with an eye to the condition of the stomach.

The Fruit Breakfast.—There is a class of cases which makes the most enthusiastic doctor alive wish he had chosen any other vocation than medicine.

Patients with thick, non-circulating blood, torpid lymphatics and dormant secretions. Patients with stiffened joints, gouty deposits, chronic neuralgias, torpid livers, uric acid kidneys, and the irritable nerve centers that go with them. These patients, and others who suffer from errors of nutrition, can be greatly benefited, not to say cured, by the simple dietetic procedure known as the fruit breakfast. This means just what it says. Fruit, all the patient wants, and nothing else, for breakfast. No chops, bread, cereals, coffee, tea, or anything but fruit before 12 o'clock. By fruit is meant apples, oranges and grapes only.—*Chicago Clinic.*

STRAY THOUGHTS

From Everywhere, by Everybody and for Everyone who Wants to Read Them.

FACES.

Men's faces are the portraits of their souls,
The very image of their inmost thoughts,
For if man's life be warped by vice and crime,
His face will show their imprints more than all.
But let his life be full of noble deeds,
Of love for God and sympathy for man
And heav'n itself will touch the homely face
Like golden sunshine after April show'rs.

H. Edwin Lewis

WOMAN.

"Let me add in passing, that Woman is the one thing that makes life worth living, not

from the standpoint of passion, which though important, is only incidental, here to-day and gone to-morrow, but from the plane of pure unselfish, self-sacrificing love, the love which is more than love, an all absorbing, burning sense of duty, a devotion higher, stronger than love of life or eternal happiness. Woman as friend, sister, daughter, wife, mother, grandmother (or even as mother-in-law) is the noblest work of God. Her love, (and none better than doctors know, that passion enters little into her love,) never wavers from the beginning, through babyhood, romping girlhood, mature womanhood, marrriage, the first discomforts of pregnancy, through the throes of labor (sufferings which if a man had to bear would result in the world's prompt depopulation), on down the weary work of her offspring's life to the supremest sunlit summit of its success or the foot of the scaffold.

The average woman, judged by the standards of the heart, the soul, the capacity for loving, is too good for the best man that walks the earth to-day, and the worst woman in the lowest depths of degradation (degraded in that she loved not wisely, but too well) by the same token, is too good for the average man."

—*I. N. Love.*

"WHATEVER THY HAND FINDETH TO DO, DO IT WITH THY MIGHT."

There is nothing so small that it should remain forgotten, or no fact however trivial that may not lead us to great results. With perseverance, the very odds and ends of time may be worked up into results of the greatest value. One hour a day rightly used would make an ignorant man a well informed one in less than ten years. The hours perish and are laid to our charge. Time is the only little fragment of Eternity that belongs to man, and like life, it can never be recalled. A bushel of acorns may become a forest of oaks, but the tree must grow before we can measure it. So there are many things in men's brains, but we must see something before we can tell just what may be there. A great many would like to go to bed dunces, and wake up Solomons, but it cannot be so. We reap only what we sow. Those who sow dunce seed, vice seed, laziness seed, usually get a sure crop. The most of those who have made dead failures in life can look back and see a time when they might have achieved success, but they were not ready to grasp the opportunity. They have no faith, no pluck, no push. There is plenty of room at the top, but they never try to climb. The man who succeeds in these days must put his heart and the best spirit he is capable of into his work.—*Alkaloidal Clinic.*

BOOK NOTICES.

Clinical Hematology.—A Practical Guide to the Examination of the Blood with Reference to Diagnosis. By John C. DaCosta, Jr., M. D., Assistant Demonstrator of Clinical Medicine, Jefferson Med. College; Hematologist to the German Hospital, etc. Published by P. Blakiston's Son Co., Phila., 1901.

This book, designed as a practical guide to the examination of the blood by methods adapted to routine clinical work, represents a successful endeavor to recount the salient facts of hematology as they are understood at the present time, to correlate certain of these facts with familiar pictures of disease, and to apply them to medical and surgical diagnosis. The purpose has been to interpret the blood report according to its true value as a clinical sign, neither exploiting it as a panacea for every diagnostic ill, nor belittling it because of its failure consistently to give the sought for clue in every instance.

The methods of examination likely to prove useful in every-day practice have been described in detail, in the hope of thus simplifying the minutiæ of blood-counting, staining, and other means of investigation. In the discussion of the primary anæmias and of the anæmias peculiar to infancy, prominent clinical features other than those referable to the blood, have been briefly mentioned, in order to add clearness to the differential diagnosis. For convenience in reference, the various diseases included in the section on general hematology are arranged alphabetically, rather than grouped according to a traditional classification.

The greater part of the original data referred to in the text is taken from the records of the Pathological Institute of the German Hospital, Philadelphia, where a systematic account of all blood examinations has been kept for the past six years. The remaining data

represents the writer's personal examinations in hospital and private practice and in the army medical service, these sources of statistics together including about four thousand blood reports in various pathological conditions. Hematological literature has been freely consulted in the preparation of this volume, and due credit in the text has been given to the authors of whose labors use has been made.

This book is unquestionably one of the most important of the year's publications. Its importance can only be appreciated by a careful perusal of its contents. It will be found eminently scientific and modern and for many a day will hold undisputed sway as *the* authority on hematology. The illustrations are unusually fine and appropriate.

THE MEDICAL STUDENT'S DICTIONARY.—11th Edition. Illustrated. By Geo. M. Gould, A. M., M. D. Including all the Words and Phrases Generally Used in Medicine, with their Proper Pronunciation and Definition, Based on Recent Medical Literature. With a New Table of Eponymic Terms and Tests and Tables of the Bacilli, Micrococci, Mineral Springs, etc., of the Arteries, Muscles, Nerves, Ganglia, Plexuses, etc. 11th Edition. Enlarged by over 100 pages and illustrated with a large number of engravings. 840 pages. Half Green Morocco, $2.50; Thumb Index, $3.00.

Size for size this dictionary is the peer of any other in the English language. It is called a medical student's dictionary but the general practitioner can find no better for his constant use. It is remarkably complete and so concise and clear cut in its definitions that it is a genuine pleasure to use it. The accuracy of the terms and orthography are especially noticeable and the book well deserves the authoritive position it holds in the scientific world.

One great advantage of the dictionary is found in the fact that the cross references are very few. Each word with few exceptions has its own definition and the reader is seldom referred to synonymous words.

The tables are a valuable feature and very complete.

In every way the book is a time saver and we cannot too highly commend it as a handy, complete, accurate dictionary of medical words and phrases. Its price is remarkably low for its great value and the enormous number of these dictionaries that are found throughout the U. S. on the desks of wide awake physicians, tells truer than words how popular they are.

MANUAL OF DISEASES OF CHILDREN.—By John Madison Taylor, A. M., M. D., Professor of Diseases of Children Phila. Polyclinic, and William H. Wells, M. D., Adjunct Professor of Obstetrics and Diseases of Infancy in the Phila. Polyclinic. *Second Edition* thoroughly revised and enlarged. Illustrated. Published by P. Blakiston's Son Co. Phila. 1901.

In this edition the book has been thoroughly rewritten and many new chapters and special articles have been added. The articles on infant feeding have been entirely remodeled and brought abreast of the great advances that have been made in this branch of pediatrics. A chapter on Diseases of the Ear has been added; that on the Blood is practically new and remarkably thorough though brief. The chapter on Diseases of the Nervous System has been carefully revised and several new articles have been added; that on the Skin has been rewritten. Those treating on Infectious Diseases, Diseases of the Heart and Respiratory Disorders have had much new matter added to them.

The book is assuredly a succinct presentation of the whole subject of diseases of children. Modern treatment, including antitoxin and intubation, is thoroughly taken up, and diagnosis is so completely considered that the book forms a splendid working manual for every day use. There is certainly no more satisfactory manual on the subject. It is unusually reliable and the publisher's work has been well done. The book is amply illustrated with appropriate cuts and plates.

STRUMPELL.—A TEXT-BOOK OF MEDICINE for Students and Practitioners. By Dr. Adolf Strumpell, Professor and Director of the Medical Clinique at the University of Erlangen. Third Revised American Edition. Translated by Permission and thoroughly Revised, from the Thirteenth Revised and Enlarged German Edition, by Herman F. Vickery, A. B., M. D., Instructor in Clinical Medicine, Harvard University; Visiting Physician to the Massachusetts General Hospital; and Philip Coombs Knapp, A. M., M. D., ex-President of the American Neurological Association; Clinical Instructor in Diseases of the Nervous System, Harvard University, etc. With Editorial Notes by Frederick C. Shattuck, A. M., M. D., Jackson Professor of Clinical Medicine, Harvard University, etc. With 185 Illustrtions in the Text and 1 Plate. Prices: Cloth, $6; sheep, $7.

This new edition of Strumpell's Text-book of Medicine has just been issued by D. Appleton & Co., of New York. It is a magnificant octavo volume of nearly 1,300 pages, neatly bound in cloth, and illustrated with 185 engravings. The translation is done by Dr. Herman F. Vickery, Instructor in Clinical Medicine at Harvard University, and Dr. Philip Coombs Knapp, Clinical Instructor in Nervous Diseases in the same school; with editorial notes by Frederick C. Shattuck, Professor of Clinical Medicine at Harvard.

This work has long been popular with American students and practitioners and no medical library in the country is considered complete without Strumpell. Greater attention is given to diagnosis and treatment than usual with text-books on practice, and this fact makes the work attractive. The therapeutic suggestions are especially good and will be found extremely helpful.

Mention should be made of the department of nervous diseases which is especially thorough and complete.

There is no question but what this book is one of the best one volume text-books on the practice of medicine before the medical profession. Author, translators and editor all deserve praise for their successful work.

THE NEWER REMEDIES.

Antikamnia and Heroin Tablets in Prevalent Grippal Conditions.—Thos. G. Rainey, M. D., L. R. C. P., Resident Physician, British Medical Institute, Atlanta, Ga., in a recent article states, that the comparatively new combination of drugs, antikamnia and heroin tablets, which has been so largely used for the control of cough, is also being successfully employed, to a large extent, in the treatment of nearly all affections of the respiratory tract, which are accompanied by dyspnoea and spasm, namely: Asthma, Bronchitis, Laryngitis, Pneumonia, Phthisis, Whooping Cough, Hay Fever, La Grippe, etc. In cases in which the patients were suffering from the severe attendant pain of these diseases,it was found that this combination acted most satisfactorily. Each tablet contains five grains of antikamnia and one-twelfth grain heroin hydrochloride. One tablet was followed by a rapid diminution of pain, and after the third tablet the pain entirely disappeared. In treating the affections enumerated above, the dose is one tablet every two, three or four hours according to indication.

Anaemia, Iron and Oil.—The abundance of fat found in healthy bone marrow and the scarcity of fat in the bone marrow of anaemic patients suggests a reason why Cod Liver Oil is so often efficient as a remedy for anaemia. Iron certainly acts as a tonic and is an important constituent of haemoglobin but it can scarcely contribute anything towards the organic substance of the red corpuscle. How the bone marrow changes fat into red corpuscles is one of nature's mysteries, but the microscope shows the marrow cells in all stages of transition into new red corpuscles and abundantly surrounded by fat cells.

Cod Liver Oil seems to be a natural food for bone marrow. Scott's Emulsion, a reliable preparation of Cod Liver Oil, is often of great use in relieving anaemic conditions especially the chlorosis of young women. That anaemic

blood should regain its color without the administration of iron only reminds us of the fact that ordinary food contains all the iron the system needs and probably the only form of iron the system ever really absorbs.

Mr. J. S. Tyree, Washington, D. C.

Dear Sir:—I have used Tyree's Antiseptic Powder quite extensively in hospital and private practice in surgical cases and find it invaluable as an antiseptic, deodorizer and disinfectant. I am

Very truly yours,

FREDERICK REMINGTON, M. D.

Surgeon to Monroe County Hospital, Rochester, N. Y.

Formula:—Parts, sod. bor., 50; alumen, 50; ac. carbol., 5; glycerin, 5; the cryst. principles of thyme, 5; eucalyptus, 5; gaultheria, 5, and mentha, 5.

Doctors desiring to investigate and confirm these claims may secure a half-pound package (sufficient to make eight gallons of standard Antiseptic Solution) mailed to any address upon receipt of 80 cents.

Cancer of the Uterus.—The so-called granular "os" is now known to be a common starting point of cancer of the cervix uteri, and there can be no doubt that the early recognition and treatment of this condition will do much to reduce the still appalling mortality of cancerous diseases in women. A simple and effective way of treating granular degeneration of the cervix is to insert a Micajah Uterine Wafer into the Vagina so that it will be in contact with the os, and hold it in position with a pledget of cotton. These applications may be made every two or three days, being preceded each time by a copious hot douche. As the result of the antiseptic, astringent and stimulant action of the wafers, the erosions rapidly cicatrize with restoration of the parts to a perfectly normal condition.

I have employed the Pepto-Mangan (Gude) in a case of marked secondary anæmia with profuse gastro-intestinal hæmorrhages due to an ulcer of the stomach, with most excellent results. The patient, an extremely weak woman who was somewhat disinclined to take any kind of medicine, praised within a short time the very agreeable taste of the preparation, and her appetite and condition of nutrition improved very rapidly, so that at present she exhibits a very healthy appearance. Pepto-Mangan has been regularly continued in her case.

According to other experiences I am warranted in concluding that your Pepto-Mangan, owing to its agreeable taste and ready digestibility even in the presence of impaired gastric function, belongs to our most valuable ferruginous preparations.

Dr. AUG. HAMMER,

Medical Councillor; City Phys.

Bathing Establishment at Langerberg, near Marienbad, Bohemia, Aug. 21, 1901.

IMMUNITY.—We have prescribed your ecthol in at least one hundred cases during the last two months, and received satisfactory results. It was mostly prescribed as a prophylactic internal medicant. The contagion here is the same as has been discussed in the medical journals of recent date. It corresponds to small pox very closely up to the time of eruption. We cannot advise its use in this disease during the eruptive stage, as had much better results with merely warmth from the stove. Ecthol retarded the eruption when drachm doses three times daily were given after fever started. We saw these results with those cases who were taking the medicine too late for prevention, or, in other words, after incubation was well along; however, we will say we know of no one taking the disease, no matter how much they were in contact with all stages of it, who persistently took the ecthol during such exposures and before incubation was on them.

Drs. STRICKLER *and* DICKINSON.

Ketchikan, Alaska, Feb. 3, 1901.

TO MARRY OR TO BURN.—Discussing "matrimony and gonorrhœa," Dr. Joseph Price, of Philadelphia, says: "This is one of the burning questions of the day and should be considered with the greatest care and conscientious-

Purity at Any Cost!

The careful physician is becoming more and more particular about the quality and source of his diphtheria antitoxin.

He demands a serum of responsible manufacture—a serum of known potency—a serum that is reliable—a serum that is safe!

Whose antitoxin best fulfills these requirements?

This is a question that concerns every physician—a question that is vital.

Our Antidiphtheritic Serum has an unbroken record as a saver of human life.

In the seven years of its manufacture we have marketed millions of doses.

During all that time it has never caused a fatality—never caused a mishap.

The scientific methods used in the preparation of our Antidiphtheritic Serum preclude the possibility of contamination.

The bacteriological and physiological tests to which we subject every parcel of it before it leaves our laboratories make doubly sure its absolute reliability.

We guard every step of the way—from first to last we never relax our vigilance.

Purity — PURITY AT ANY COST! — this is our watchword.

Parke, Davis & Co.

BRANCH HOUSES:
New York, Kansas City,
Baltimore, New Orleans, Chicago;
London, Eng.; Montreal, Que.

Home Offices and Laboratories,
DETROIT, MICH.

BRANCH LABORATORIES: Hounslow, Eng.; Walkerville, Ont.

ness." He sees more reason to lock up a man with gonorrhœa than to incarcerate a common murderer. St. Paul also canvassed this "burning" question and concluded that it is better to marry than to burn. But there is trouble either way.—*Indiana Med. Journal.*

A Lesson from the Masters.—The study of the practice and teachings of the really great men in medicine is a fruitful source of knowledge and practical guidance in the management of disease. Two principles are clearly recognizable; first, that Nature possesses the ability to successfully combat the acute infectious diseases without the necessity of resort to powerful drugs for the relief of symptoms; second, that treatment is most successful which is most simple and which has for its object the reinforcement of Nature's methods of antagonizing the encroachment of the disease processes. The application of these principles constitutes the most successful methods of treating influenza, pneumonia, bronchitis and the numerous winter diseases associated with inflammation of the respiratory organs.

One method of treating these conditions is by administering a powerful and, in truth, a depressing drug for practically every symptom, e. g. opium in some form, to control cough, a cardiac and metabolic depressant to reduce fever, stomach-disturbing remedies as expectorants, etc. This plan of treatment is, authorities assert, antiquated, irrational and ineffective. On the contrary it is a matter of absolute fact, proven by experience, that if a patient with pneumonia, influenza, severe bronchitis, is properly nursed, given adequate easily assimitated nourishment and be given Gray's Glyc. Tonic Comp. in dessert to tablespoonful doses every three or four hours, that patient will withstand the attack much better and be surprisingly free from the pronounced depression which accompanies and succeeds these diseases. This plan of treatment has also the great advantage that the patient is spared the baneful effects of excessive drugging.

Gray's Tonic not only fortifies the patient's strength, aids digestion and assimilation, but has an unqestionable influence in palliating the symptoms of respiratory inflammation.

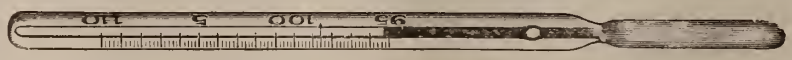
A Question of Choice.—When the eloquent divine, the Rev. Thomas Burke, was traveling through this part of the country delivering lectures nightly in crowded halls, he was accosted on a train one day by a man who evidently wanted to be able to say he had conversed with the much-talked-of clergyman. He approached the priest, saying: "I understand you're the famous Father Tom Burke."

"I'm Father Burke," was the reply.

"Well, now, you know, Father," continued the man, thinking he had a subject productive of conversation, "I don't believe in purgatory."

After this brilliant challenge he waited. Without seeming to be very much interested, and in a calm tone of voice, the great Irish wit said, "Well, go to hell, then."—*Medical Standard.*

Do You Need Another Good Thermometer?



Send us $1.50 and we will send you the Vermont Medical Monthly one year, and a splendid quick registering clinical thermometer, with magnifying index, by return mail. We have a limited supply of these thermometers. and if you wish to get one and *a good live Medical Journal for one year* answer at once. The thermometer alone is worth the price we ask, but to increase our circulation we make this exceptional offer for one month.

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ORIGINAL ADDRESS

THOUGHTS ON SURGERY

An Address Delivered at the Opening of the 49th Session of the Medical Department of the University of Vermont.

By John B. Wheeler, M. D., Professor of Surgery, Burlington, Vt.

Mr. President and Gentlemen—Gentlemen of the Medical Class:

In the course of the session now opening, it will be my privilege to appear before you many times and to tell you what I can about surgery. It is an attractive subject to almost every student. I do not doubt that many of you would like to be surgeons, if a fair opportunity should offer, and that some of you mean to try to be surgeons, opportunity or not. Some general suggestions, then, may appropriately precede the more systematic instruction contemplated in the course and in this opening address I shall try to give expression to a few thoughts on surgery.

It is not easy to give a satisfactory definition of surgery. Generally there is little difficulty in deciding whether a given case is medical or surgical, provided the diagnosis is correct, but to frame a sentence which adequately describes the province of surgery is more of a task. Perhaps we may say that surgery is that department of the healing art which deals with injuries and with such diseased conditions as may involve treatment by operative or mechanical measures. This definition may serve, for want of a better. It covers the meaning suggested by the old word chirurgery—literally handiwork,—but admits the possibility of the surgeon's having some use for his brains as well as for his fingers. It fails to emphasize properly the far greater importance of headwork in surgery than in the chirurgery of old times. The name chirurgeon, or hand-worker, was applied to the surgeon in the days when he kept a barber shop and his sole surgical function was to carry out the orders of the physician, who at that time was too grand a gentleman to stoop to what he considered mere manual labor. He sent for the chirurgeon and said, "Bleed this man," or "Open his abscess," or "Trepan him," and the chirurgeon did as he was bid, and then hastened back to his barber-shop and resumed the practice of his other specialty.

Time, anesthetics and asepsis have changed all that. Headwork is now as essential for the surgeon as for the physician, for the domain of surgery has extended until there is no part of the body which is inaccessible to the surgeon. Even the heart does not entirely escape him. But in spite of the mental labor which such work requires, handiwork remains the distinctive feature of surgery. Its wonderful progress in our day is due to the discovery that the surgeon's hand can safely and successfully deal with conditions for which no successful means of medication has yet been found. Surgical handiwork, too, is intensely interesting, as compared with medical treatment. It is a fine thing to be able to see clearly what you are doing and to feel that it is you yourself who are doing it and not drugs or diet or the patient's constitution. It is inspiring to feel that you are the master of a critical situation and are capable of meeting an emergency as it arises. And when you have obtained a successful result in surgery, you can generally be sure that the credit for that result belongs to you,—surer than you can be in medicine, where so many more unknown fac-

tors have to be considered. Of coure it is not *you* who have cured the patient. His cure has been accomplished by forces over which you have no more control than the pilot has over the wind which brings his vessel into port. But like the pilot, you know that you have made use of the forces of nature to accomplish your purpose, that your craft has come past rocks and shoals from which your guidance has saved her and that she would not be in port if it were not for you.

This is what makes surgery so attractive. But the same directness of responsibility which makes success so sweet, makes failure equally bitter. In a forlorn hope operation, done in order to give a patient who is in the most imminent danger the only chance for his life, failure is not so hard to bear, for then you feel that you have done the best you could and that although your operation has not saved his life, death would have been certain and speedy if you had not operated. But take, for instance, such a case as sometimes occurs, where a patient in good general health has a tumor which, though not making much trouble at present, is sure to prove fatal in two or three years. The danger attending an operation for its removal is slight in comparison with the doom which, in a short time, will overtake the patient if no operation is done. In such a case, operation seems not only justifiable, but imperative. You operate and instead of the successful results which the statistics of operation and the condition of the patient gave you every reason to expect, the patient dies. Then you realize that there is a point of view from which surgery is not wholly attractive. Even though you know that your decision was, in the light of human knowledge, the proper one and that the fatal result was not due to any blunder or technical failure on your part, the stubborn fact remains that your operation, instead of saving your patient's life, has shortened it by two or three years, and the reflections to which that fact gives rise are far from agreeable.

Such cases do not occur often, but if a surgeon does much operative work, he is sure to encounter some of them. So if you intend to take up surgery, remember that not only success, but failure also, is more conspicuous in surgical than in medical practice, and that you must be fond enough of the work and have faith enough in it and yourself to endure patiently the bitter chagrin of an occasional failure.

But in saying that handiwork is the distinctive feature of surgery, I do not mean to imply that it is the principal one. A good surgeon must, of course, be a skilful operator, but he must be a great deal more. Operative dexterity is of great importance and no pains should be spared in acquiring it, but there are other things whose importance is greater.

Skill in diagnosis is one of these. A surgeon who is not a good diagnostician does not know what he is about. He may be able to handle knife and saw as deftly as a butcher, but his opinion as to the nature of the disease, and consequently as to the way in which it should be treated, is scarcely more valuable than that of the butcher. It is true that, in these days of great operative possibilities, many operations are justifiably undertaken for the sake of arriving at a diagnosis. You will undoubtedly see some of these exploratory operations at the clinics this year. Owing to the limitations of our physical senses and mental processes, it is sometimes impossible to make a diagnosis without using the knife, but the taking of the literal short cut to knowledge is not to be recommended unless there is no thoroughfare in any other direction. The scalpel is a therapeutic, not a diagnostic implement, and the best surgeon is the one who seldom has to use it for the purposes of diagnosis.

Another important qualification for a surgeon,—perhaps the most important of all,—is judgment. Without good judgment, skill in diagnosis is impossible, and in deciding the practical question what to do for your patient,

judgment is all-important. If surgery followed a set of hard and fast rules, it would be easy work,—just learn the rules and then follow them. This recalls Commodore Vanderbilt's answer to the young man who asked him how to succeed in Wall Street. The Commodore replied that it is the simplest thing in the world. All there is to do is to buy stocks when they are low and sell them when they are high. Now the rules which govern the practice of surgery are no more absolute than those by which financial operations are conducted, and as few surgical cases are exactly alike, the main difficulty for a properly educated man lies in the application of rules to the case in hand. This calls for judgment. In the matter of diagnosis, judgment consists in a proper appreciation of the relative importance of the different facts and symptoms which the case presents. This is what my old teacher, the late Professor Henry J. Bigelow, used to call "mental perspective." He was in the habit of saying that although accurate observation is essential, it is not enough to be an accurate observer. You must also know *what to observe.* Otherwise the perspective of your mental picture of a case will be faulty, facts will not stand out in the order of their relative importance, and the conclusions which you draw from them will be incorrect.

And when the question of treatment comes up, judgment is often of the highest importance. Suppose the diagnosis to be made of a condition ordinarily treated by operation. A number of questions immediately arise. Is this case an exception to the rule? Is there anything about the patient's condition or constitution that would render an operation more than ordinarily dangerous? Is this the best stage of the disease in which to operate, and if not, would the risk of waiting for a more favorable moment be greater than the risk of operating at once? Are the surroundings of the patient and the after-treatment which he will receive of such an inferior character as materially to increase the risk of operating? In some cases the indications, one way or the other, are so plain that these questions hardly present themselves, but in others the patient's life depends upon the careful consideration and sound judgment with which they are decided.

Such decisions, therefore, involve great responsibility. But there is a tendency to look upon this responsibility as though it were one-sided, as though a heavy responsibility were assumed in advising an operation, but none at all in advising against one. Now an operation always involves risk, sometimes trifling, sometimes grave, besides more or less pain and inconvenience and, in many cases, serious loss of time, so that he who advises an unnecessary operation does assume a heavy responsibility. But the risk of the most dangerous operation is often less than that of the condition from which relief is sought, and the pain, inconvenience and loss of time resulting from an operation are a cheap price to pay for the cure of a mortal disease. Therefore he who advises against an operation which is clearly indicated, also assumes a heavy responsibility, that of depriving the patient of his best, perhaps his only chance of life and health. Heedlessness in surgery is outrageous and intolerable, whether shown in the rashness which urges a dangerous and unnecessary operation, or in the unreasoning terror which opposes one which is clearly indicated. Perhaps, all things considered, the second kind of heedlessness does no more harm than the first, but it certainly is more cowardly.

I might go on and speak at length of various qualifications almost, if not quite as essential for a surgeon as good judgment and diagnostic skill; of courage of every kind, especially the kind which Napoleon thought so admirable in a soldier, the "two-o'clock-in-the morning" courage; of the cool, level head which does not "get rattled" in the most unexpected and trying emergencies; of the resourcefulness which contrives somehow to accomplish its purpose when all ordinary means

for so doing are lacking; and so on. But to do this would require more time than is at my disposal and more patience, I fear, than is at yours. There is another line of thought which I hope can be followed for a few minutes, without overstepping the bounds either of my time or your patience.

Whatever your desires may be, few, if any of you will practice surgery exclusively, and few, if any of you can wholly escape surgical practice. Most of you will probably find yourselves beginning your work as general practitioners in the country, whether you stay there all your lives or not. Now there is a great deal in country practice that is interesting and fine and heroic, but there are some features of a country doctor's life which are suggested by Kipling's well-known lines, altered to suit the subject:

"Now his work begins at God knows where and his work is never through;
"He don't go to bed till one A. M. and he gets up again at two,
"Because he's a doctor, a country doctor, physician and surgeon too!"

Of the various emergencies which give country practice this character, the surgical ones form an important function. To be sure, people do not expect the country doctor to do capital operations, but they do expect him to reduce fractures and dislocations, to do such work as minor amputations and to recognize conditions which require surgical treatment at the hands of a specialist. A young practitioner is liable to stand or fall by his surgical work, success along that line unduly enhancing and failure unduly injuring his reputation. Let me then say a few words about the preparation which students should make to fit them to do the surgery which falls to the lot of the general practitioner. There is no danger of your knowing too much surgery, even though you intend to do general practice. The more surgery you know the better, but there are some subjects on which it is especially necessary that you should be well informed.

One of these subjects, that of diagnosis, has already been mentioned. The general practitioner, most of whose attention is turned in other directions, cannot expect to make a refined and elaborate diagnosis of an obscure surgical condition. But there are a great many common surgical conditions which he ought to be able to recognize, and when he encounters an obscure case, he should know enough not to make the mistake of supposing, off-hand, that he knows all about it. I advise you, then, even those of you who do not expect to do any surgical work at all, to pay particular attention in your surgical studies to the matter of diagnosis. You do not want to hand a case over to a surgeon merely to have him tell you that it is a medical and not a surgical case and that you had better treat it yourself. Nor do you want to waste precious time in the medical treatment of a case for which surgery offers the only chance of cure. The only way to avoid such mistakes is to ground yourselves thoroughly in diagnosis, especially of the common surgical conditions. Even if he intends to turn all his surgical cases over to some one else, the man who cannot diagnosticate, for instance, between hernia, hydrocele and varicocele, or between ascites and an ovarian cyst, will surely find a time when his ignorance will get him, as well as his patient, into trouble. Especially important is the early diagnosis of malignant disease. Modern surgery shows nothing more clearly than that cancer is curable if recognized early enough to admit of its thorough removal. It has been well said that the life of a woman with uterine cancer depends on her family physician more than on anyone else. He is the first to be consulted and if he is able to recognize the condition in its early stage, he can advise an operation whose probable result is cure. But if he fails to make his diagnosis until the disease has taken a firm hold, the patient is doomed. At that stage, surgery can no longer save her life and perhaps cannot even prolong it.

Fractures and dislocations are the department of surgery which is forced upon a general

practitioner. These accidents occur in the country as often, in proportion to population, as anywhere else, and the doctor who cannot deal with them in an intelligent and workmanlike manner, loses the confidence of the community in which he practices. Malpractice suits follow fractures and dislocations oftener than any other class of cases, and although, so far as my observation goes, the doctor is not at fault in most instances, he often has difficulty in making a jury take that view of the case. It behooves him then, for his own sake as well as that of his patients, to be a master of this part of his professional work. Spare no pains, therefore, in acquiring a thorough knowledge of fractures and dislocations. Learn all that you can from books and lectures and let no opportunity escape you of examining and taking notes of a case. Learn, too, to apply bandages, splints and other apparatus efficiently and neatly. The average member of a Yankee community knows how to use his hands and will appreciate the like knowledge in you, while bungling is something for which he has no use.

In general country practice you will need to be well acquainted with the various procedures of minor surgery, poulticing, cupping, blistering, cauterizing, hemostasis and so on through the list. The administration of anesthetics is a minor surgical procedure of the utmost importance and one which every physician ought to understand thoroughly. There is also some operative work which falls into the hands of the country practitioner, such as felons, palmar abscesses, finger and toe amputations and wounds of the hand or foot. The question whether a whole extremity is saved or lost often depends on the doctor's ability to do this kind of work. Some emergency operations may sometimes be thrust upon you through lack of time to send for a surgeon. Tracheotomy, intubation, hemiotomy are of this class and you should familiarize yourselves with these procedures as life-saving operations which you may, sometime, be called upon to perform. Surgery of the hand and foot, however, is practically sure to come to you, and the operations on those parts you ought to practice and master.

You also ought to thoroughly master the principles of antisepsis and asepsis. Unless you do, you will not get the best results in such operations as fall to your lot, any more than you will in your obstetrical work. Moreover if, as is liable at any time to happen, you are obliged to call a surgeon from a distance to perform a capital operation on one of your patients, the post-operative care of the case will be in your hands. In changing the dressings, surgical cleanliness is as essential as in performing the operation and unless you know how to secure it, you run the risk of infecting the wound, the result of which is likely to be fatal to the patient.

These words of advice to students who are looking forward to general practice may be summed up as follows: Learn all the surgery you can, but be sure that you are well grounded in the following subjects:

1. Diagnosis, especially of the common surgical conditions and of the beginning of malignant disease.
2. Fractures and dislocations.
3. Minor surgery, operative and non-operative, and some of the larger operations of emergency.
4. Antisepsis and asepsis.

To those of you who are contemplating surgery as a specialty, I should like also to say a few words. No undergraduate course can do more than to lay a good foundation for your surgical education. If you succeed in assimilating all the surgical instruction you receive before graduating, you will only have made a beginning, so take in all you can, that the beginning may be a good one. But do not neglect other branches of instruction, for in all medical specialities the best men are those who have a good comprehension of the principles of general medicine and a fair amount of experience in its practice. Everyone who intends to be a surgeon should first be a general practitioner.

When you get fairly into the practice of surgery, the probability is that you will not find it as glorious professionally, or as profitable financially, as you anticipated. As has already been said, the glory of success is, to a certain extent, offset by the ignominy of failure. From the financial point of view, for every operation for which you get a good fee, you are likely to do ten for which you get no fee at all. But if you are blessed with a tough physique and an optimistic temperament, a fair amount of natural ability and a real liking for the work, you will find yourselves, as time goes on, achieving at least the ordinary amount of professional success, accepting philosophically the hardships, trials and disappointments of a surgeon's life and looking with abundant satisfaction upon your choice, for a life's work, of the most fascinating of all the departments of the whole art of healing.

GONORRHEAL RHEUMATISM.—Put to bed only if lower extremities are attacked, says J. R. Hayden, immobilize joints, and apply compresses wet in cold lead-and-opium wash. When the acute symptoms subside apply the Paquelin cautery, or rub in compound iodine ointment, and make firm and uniform pressure by a bandage. If then the fluid remains it may be withdrawn and the joint irrigated with mercuric bichloride, 1-5000. In the chronic stage the joints are massaged and exercised daily, and large doses of potassium iodide administered. The most important thing of all, however, in gonorrheal rheumatism is to cure the urethral lesion.—*Venereal Diseases.*

A CHEMICAL EPITAPH.

He had an all-consuming thirst,
Drank everything in sight,
And this same thirst caused Weary Bill's
Tired soul to wing its flight;
He found a jug and quenched his thirst,
His face no more we'll see;
He thought it C2 H6 O,
It was H N O3.

—*Factotum.*

ORIGINAL ARTICLES

A STUDY OF IDIOPATHIC OR PROGRESSIVE PERNICIOUS ANAEMIA, WITH CLINICAL AND POST MORTEM REPORTS OF A HIGHLY INTERESTING CASE.

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It would be quite out of place as well as too laborious an undertaking to give anything like a complete historical record of the progress of knowledge concerning this disease, so ponderous has become the bibliography of literature on the subject; and hence all that I will attempt is to indicate some of the literary landmarks which have led us up to our present knowledge of the disease and more particularly some notes and queries concerning the clinical and pathological inquiries in an interesting case, which has come under my immediate observation and research.

The first clinical picture of pernicious anaemia as a distinct disease from the anaemias in general, was given by *Addison,* who described the disease and termed it "idiopathic" mainly on the ground of an apparent unassignable cause for its occurrence.

Lebert then came forward and applied the term "Essential Anaemia" and contended that he had seen and described the disease for the first time in the year 1853. As to just what improvement the name "Essential" was over "idiopathic" we are at a loss to know; however, *Wilks* put several cases on record in 1857 and went on to elucidate the pathological features of the disease under the term Addison Disease. Until the year 1868, however, the work had only been superficially investigated. *Biermer* then came forward with a thorough investigation into the findings, clinical and post mortem, and differentiated it from the secondary anaemias. Later on, he related the entire

history of the disease and its pathological features and named it "Progressive Pernicious Anaemia." There have since been attempts to change the name to "Biermer's Anaemia," but the quite descriptive and well expressed name has still survived and no doubt will remain with us, although *Grawitz* opines that he is not satisfied with the term and desires a more expressive one. *Biermer* also drew attention to the great frequency with which the heart, arteries and capillaries underwent fatty degeneration in both idiopathic and secondary anaemias and also haemorrhages and enlargement of the spleen as accompaniments of the disease. The condition of fatty degeneration of the heart, which is so common a complication of the disease, was specially investigated by *Ponfick* who contributed the fact that long standing haemorrhage, when excessive will always cause it.

The investigations upon the bones has generally been conceded to *Cohnheim,* but *Pepper* and *Fede* are credited with similar results at a previous date, and so on, we might go on with similar references to priority claims for credit in the history of this disease. However, the knowledge we have of the true conception of the disease to-day, depends upon the combined labors of many laborers and not on any one. True it is that *Biermer's* paper marked an epoch in the explanation of a disease which previous to his time had been involved in obscurity and priority claims, and *Addison* clearly defined the limitations of the primary type of the disease. Since *Biermer's* investigation of the retinal haemorrhages said to have been one of the pathognomonic symptoms of the disease, it has been found by *Quincke,* that they are found in other diseases and not necessarily in anaemia. He was the first to contribute the microscopical characteristics found in the blood and to call attention to the deficiency in haemoglobin and the occurrence of siderosis or pigmentation in various organs which primarily was thought to be due to free iron deposits, due primarily to the destruction of red cells.

The term "idiopathic" in our medical nomenclature is only an indication to most of us, that the true pathological knowledge concerning the disease is still involved in a beautiful obscurity. However, the examination of the blood and urine in life, taken in conjunction with the changes found in certain organs and tissues after death, has thrown some light on the nature of the disease and yet we seem to be far from the true aetiological factors.

In health there is a constant equilibration between haemogenesis and haemolysis, and it is the derangement of these conditions and their causes which interests us above all others.

The pigment of the urine—urobilin and the pigment of the faeces stercobilin are both iron free derivatives of haemoglobin and it has likewise been shown that urobilin is present in excess in the urine of pernicious anaemia cases, and that even the peculiar color of the skin is due to this excess of pigment extraction. Although this may be true, yet it seems far more rational a belief to say that the yellow color of the skin is due in great part to a non-neutralization of color, super-imposed upon the fat layer, as is usually the case during capillary action poorly supplied with red blood cells. The reduction of red cells and haemoglobin explains rationally the extreme pallor and the yellow color of the skin and does not consistently derive its source from the urobilin or stercobilin.

Quincke has shown in a very excellent monograph that iron is found practically free in the liver and to a less degree in the pancreas and spleen. He stated that these organs sometimes appear at autopsy almost slaty-black, due, he thought to the action of sulphuretted hydrogen upon the free iron in the tissues.

Without further consideration regarding the investigations and bibliography of literature on the subject, permit me to take up the history of our patient chronologically.

A. M., a man thirty-six years of age entered the Vermont State Hospital for Insane, May 14th, 1896, having been committed to Brattleboro in April, 1879, and discharged November of the same year. He was

re-admitted March, 1881, and discharged again December, 1882; was re-admitted March, 1891, and transferred to this institution on the aforesaid date. His mental alienation undoubtedly placed him in the class of *dementia praecox* cases of the common hebephrenic form.

In eliciting a history for the onset of the disease, we found that his sister was unable to say as to just when he began to show the characteristic pallor. She seemed to be quite certain that it was of long standing. The hospital history concerning his physical condition prior to the present year does not contain information of any especial value, as bearing upon the disease. July 8th, 1901, he was transferred to the hospital sick ward on account of his general pallor of countenance, and complained of a feeling of faintness and complete vertigo at times. July 12th—The temperature for the past week has varied from one to two degrees morning and evening, ranging from 98 degrees to 99.6 degrees—pulse and respiration about normal—pulse also regular and compressible—conjunctivae, mucous membranes of nose and mouth very pale—skin also very pale and waxen, with a decidedly yellowish tinge—pupils were not noticeably dilated; lungs were clear on percussion—on ausculation versicular murmur was slightly increased on left and decreased on right side posteriorly—no rales—heart was regular while lying down and a marked systolic murmur was heard loudest at base of heart, being propagated well up to lobes of ears, but when in a sitting position this adventitious sound was much lessened and therefore was doubtless somewhat haemic in origin. Apex beat was within normal limits, was easily felt in 5th intercostal space mammillary line; the spleen was not noticeably enlarged; there was some tenderness over the lumbar region posteriorly on the right side but no tumor was detected, the muscles seemed to be quite rigid and the eyes reacted promptly to light and accommodation; the knee jerks were obtained only in *Jendrassic's* position; the urinalysis at this time was negative; he had a few subjective symptoms, such as frontal headache of a transitory character, usually of ten or fifteen minutes duration—when he attempted to sit up he was seized with a sensation of vertigo and fainted twice during the week; he also complained of tinnitus aurium in the left ear, saying that it sounded "in there" like running water and that this had continued for two or three months; pain in the sacrum was complained of almost continually. He had continuous insomnia but no anorexia, having had a good appetite most of the time.

July 25th—With the use of the Dare Haemoglobinometer, the haemoglobin index registered 24%—*microscopically* with the use of eosin and methylene blue, the red corpuscles showed many poikilocytes, many microcytes, few megalocytes; some of the cells were pale while others showed an excess of haemoglobin; the red cells also showed occasional white spots and streaks (a characteristic feature which according to the literature few have observed). July 27th it was noted that his appetite was beginning to fail, and on August 10th the yellow pallor was somewhat increased and his fainting spells seemed to come on more frequently. August 15th, the patient seemed to be feeling considerable better, having had very few attacks of vertigo, but had more difficulty in retaining his nourishment. Rectal enemata of salt solution did not seem to have any appreciable effect. August 17th, was seized with an epileptoid convulsion, which continued for about three minutes—pupils were widely dilated—head was thrown back—tonic and clonic spasms of muscles occurred and his breathing became stertorous, but as far as observed he was not unconscious at any time during the seizure. Considerable nausea followed. August 24th, had a severe diarrhea throughout the day and seemed to be getting much weaker. An examination of the faecal matter revealed nothing parasitic in character and no blood cells were present.

August 27th, haemoglobin index registered as near as could be determined about 10%. This is of course somewhat inaccurate owing to the index upon the instrument not reaching as low as this. *The red blood cells numbered at this time 131,250,* which is a remarkably low percentage, the smallest count on record being 143,000, by Quincke. Microscopically using eosin and methylene blue, even a larger number of the microcytes and poikilocytes than found in the previous examination; there were few macrocytes; only one macroblost was found in several slides examined; the leucocytes were limited almost wholly to the mono-muclear form, very few of the polymuclear forms being present.

His temperature at this time was 96.6 degrees, his pulse was very weak and there was considerable dyspnea. He vomited dark granular matter which appeared to be partially digested blood but nothing of a bacterial nature was found. The diarrhea continued, and he grew gradually weaker. His temperature became markedly sub-normal, as low as 92 degrees and the patient died on the morning of the 28th.

An autopsy was performed two hours and

thirty minutes after death. The body appeared to be fairly well nourished, but the pallor of the skin surface was very striking, being of slight lemon color throughout. The conjunctivae were moderately icteric but showed no evidence of conjunctival ecchymosis. One or two small petechiae were seen upon the epigastrium but other than these none were observed, either externally or internally. The extremities were not oedematous. There were no post mortem lividities over the dependent portion. The panniculus adiposus was of moderate thickness, of a deep yellow color and the muscles of the chest were dark red in color, which was in distinct contrast to the anaemia of the skin and internal organs.

In opening the thorax, the left innominate vein being severed a large quantity of sero-sanguinous fluid escaped to the amount of about two litres, immediately after which the cardiac apparatus itself seemed quite collapsed, though prior to this being severed, the heart stood up in a tense condition, even pressing upon the pericardium and giving one the impression of hypertrophy. The blood serum had a clear yellowish tinge but did not stain the hands as some have, found in cases cited by *Albutt*.

The position of the diaphragm was at the 5th rib on the right and the 5th intercostal space on the left side. There was 104 c. c. of dark yellow pericardial fluid.

Heart weight 345 grms. The organ was very soft and flabby but presented only a moderate amount of epicardial fat. Upon further section and examination of the visceral layer of pericardium and also endocardium, no trace of petechial haemorrhages were found. The sub-pericardial fat did not seem to be increased to any appreciable extent. The whole muscular substance seemed generally very pale and felt markedly flabby. The "tabby cat striation" of Quain, on the surface of the endocardium and surfaces of the muscular papillaries was not found and no trace of "variegated whitish streaks" of a wavy character were found, though a close examination was made. The right ventrical measured two millimeters in thickness at its narrowest point, in fact at the extreme apex of the heart there seemed to be scarcely a trace of muscular tissue, there being only the thin layer of enveloping pericardium. The left ventricle measured in its widest portion one and a half centimeters in thickness, but near the apex where there was quite a perceptible bulging, it measured only one-half a centimeter in thickness. The aortic valves showed considerable fenestration of the cusps but the intima did not show the "small areas of opaque white fatty degeneration" (Albutt). Microscopically there seemed to be no evidence of fat infiltration or degeneration. The muscle cells and their nuclei stained well and save a few small granules, due to post mortem change, there were no pathological changes worthy of note.

The condition of the heart seems to be at variance with the findings of other investigators, as the great majority of observers have usually found considerable degeneration of the ventricular walls, especially marked upon the endocardium of the papillary muscles and easily observable microscopically as fatty degeneration.

The *Left Lung* weighed 290 grms. and showed no pathological changes.

The *Right Lung* weighed 430 grms. and was firmly adherent throughout the entire pleural surface by strong masses of semi-fibrous and gelatinous adhesions, requiring considerable force to remove. The pleura showed no evidence of petechial haemorrhages. The entire lung was markedly oedematous, expressing a great amount of serum and froth when sectioned. There was no evidence of engorgement or small extravasations of blood about the bronchi or bronchioles. Microscopically the infundibulum of the air cells were usually empty, a fact usually characteristic of pulmonary oedema. No bacteria were observed.

The *Spleen* weighed 150 grms. and appeared very dark red in color. The trabeculae were plain, the pulpa was notably firm and the capsule firmly adherent. Under the microscope with the use of haemotoxylon and eosin stain, there appeared to be an excess of stroma cells.

The *Liver* weighed 1410 grms., and on section the tissue was of a dark brown color with a slightly iridescent yellow tinge. Throughout the organ upon close inspection, what seemed to be numerous petechial haemorrhages, were found and in one or two spots there were found areas suggestive of small clots. There appeared to be a general diffuseness of the lobules. Well defined areas of fat degeneration were scattered about throughout the lobules but such areas were in the majority of instances confined to the vicinity of the inter-lobular veins. There was no evidence of increased connective tissue or hypertrophy of Glisson's Capsule. As far as I was able to determine, there was no evidence that free iron existed in this organ.

The gall bladder contained dark bile and was free from calculi.

The pancreas and supra-renals showed no macroscopic changes.

The *Right Kidney* weighed 135 grms., the tissue being firm but generally pale. The pyramids appeared white and distinct though the

cortex itself did not show a clear cut demarcation. The capsule adhered slightly but generally stripped off easily.

The *Left Kidney* weighed 145 grms. and save from having one small pea sized cyst near the hilum, did not appear different from the organ of the other side.

The scalp removed readily being exsanguine in the extreme. The calvarium weighed 620 grms., being cut along the usual landmarks. The bone was very red in color upon its cut surface, this being particularly noticed about the whole circumference of the bony wall. The pacchyonian depressions were also red, and the bones were thickened quite uniformly throughout the circumference of the skull. The frontal sinus extended unusually high up in the frontal bone; the skull was symmetrical and the sutures were well preserved. There was only a moderate amount of diploe. The pacchionian depression were also red, and the the sides of the temporal region, being very small and numerous, as if the bone had been peppered full of small holes reaching nearly through at acute angles, over an area on each side of the longitudinal sinus, three centimeters in diameter. The sulci of the blood vessels appeared deep and jagged. The dura mater was not at any point adherent but upon the internal surface there appeared numerous small petechial haemorrhages and clots, scattered over the parietal and occipital regions quite uniformly.

Brain weighed 1200 grms. The internal surface of the dura mater about the lower portion of the occipital region showed numerous small clots of blood of dark grey color—the pial vessels were empty and the sinuses as well. There was present a rather large pituitary body—the cysterna was clear, the ventricles were normal, and further examination likewise elicited nothing distinctly abnormal. Microscopically with Nissl's methylene blue, the large ganglionic cells of the cortex in the region of the paracentral lobule seemed not to take the stain well, there was considerable bulging and displacement of the nuclei and occasionally clumps of Nissl's granules were seen. Nissl's granules were scarcely observed in considerably many specimens, and there was a marked diffuseness also in the region of the dendrites and axis cylinders. There were no vacuoles present and pigmentary degeneration of the Boetz cells was not noted. No areas of fat degeneration were present.

Sections of the cord in the region of the medulla oblongata showed an apparent increase of neuroglia elements, but aside from this there appeared to be very little of a positive character and it would seem that in so profound a disturbance, that cell changes should have been of a more distinct character. *Gowers* in speaking of anaemia says that intense changes usually occur in nerve structures resulting from chlorosis and anaemia and that the nutrition and function of all organs suffer. The well established fact that optic neuritis may result from chlorosis is interesting as a proof of the intensity of those changes. The changes in the cord in pernicious anaemia according to *Gowers,* corresponds to ataxic paraplegia but in this case I have been unable at present, to confirm this statement.

About two inches of the tibia was removed, the marrow being markedly red in color. The same reddish appearance being also noted in the bones of the skull. The cell changes in the marrow were not worked out owing to delay in the decalcification of the bone prior to sectioning.

In conclusion, the most valuable and interesting features of the case are: The remarkably low percentage of haemglobin and the reduction of the red corpucles to 131,250—(the lowest count on record being made by Quincke 143,000); the fact that there was no trace of fat degeneration in the heart muscles; well defined areas of fat degeneration in the liver about the inter lobular veins; the fenestrated condition in the calvarium; the presence of red marrow in the bones of the leg and a reddened condition of the bones of the skull on section and in the depth of the pacchionian depressions and fenestrations,which probably was due to deposition of red cells; the presence of streaks and spots in the red cells as cited by Cabot; the failure to detect free iron in the tissue of the liver.

The condition of the stomach and intestines was not ascertained, though it would have possibly been a fruitful field of investigation to establish whether minute haemorrhages had taken place. The clinical symptoms just prior to the last week of his illness would point to some haemic disturbance in that location, as the patient frequently vomited dark granular matter, which resembled blood. The most recent investigation on the subject attributes the cause of the disease to a toxin from probably a mixed infection in the gastro-intestinal tract

but as a fact this theory has not been fully established, and no doubt will remain in obscurity until more painstaking observations surround the climatic and hygienic environments during the onset of the disease.

In an editorial comment, *American Medicine* for November, 1901, says: "The enormous amount of research, both clinical and experimental, that has been done in connection with progressive pernicious anaemia has been singularly fruitless in throwing light upon the etiology of the affection. Some consider that it is a disease *sui generis,* due to a specific and as yet undiscovered cause; others look upon it as a symptom complex that may be brought about by a variety of agencies." Both sides agree, however, upon the one point, that the blood changes are the work of toxic substances. This view being first promulgated by *Silberman* and has been adopted by *Hunter, Stengel* and the more recent writers. *Hunter* seems to have gone further than anyone in his speculations and has propounded the hypothesis that pernicious anaemia is a specific disease, due to a mixed infection, with the gastro-intestinal tract as the infection atrium. He lays special stress upon dental caries as an element in the production of the disease. In assuming that pernicious anaemia is due to mixed infection, he in a way begs the question; for if the disease is caused by bacteria at all, the chances are that the agent is a single microbic species, as it is not likely that mixed infection, which is nearly always more or less accidental and inconstant, can bring about a disease picture of such marked uniformity as that characterizing pernicious anaemia. Moreover, *Hunter* offers no convincing arguments, either for the infective nature of the disease, or for its relation to gastro-intestinal disorders. There are many undisputed cases on record where the teeth have all been perfectly sound and the gastro-intestinal derangement has been of secondary and slight consequence. In spite of this, though, *Hunter* advances therapeutic suggestions which undoubtedly should be tried. He recommends the use of intestinal antiseptics and antistreptococcic serum in addition to the usual prophylactic dosage of arsenic.

While the bacterial nature of the disease still awaits proof, the toxic origin of the blood changes has been apparently well demonstrated. Of course, the anaemia due to bothriocephalus in its true clinical features, is indistinguishable from the ordinary form of pernicious anaemia, but still a difference lies in the fact that recovery often follows the expulsion of the parasites. As the bothriocephalus is not a true haemolytic agent the anaemia produced by it cannot be due to loss of haemoglobin or blood cells as is more distinctly the case in that anaemia produced by the ankylostonum duodenale. *Tallqvist,* however, in experimenting upon dogs was able to bring about well marked anaemia by feeding recently expelled proglottids of the bothriocephalus. Certain poisons have also been found capable of producing the clinical picture of pernicious anaemia. Pyrodin and phenylhydrasin are said to be especially active in this respect.

The conclusions that we must draw at present, are that the blood changes in pernicious anaemia are the work of a toxin or toxins, but that the origin of these toxins has not been definitely ascertained, although it seems probable that in many cases, the poison enters by way of the gastro-intestinal tract.

In the preparation of specimens, I am much indebted to Dr. W. L. Wasson; he rendered further valued assistance in the use of the Dare haemoglobinometer and with the Thoma-Zeiss instrument. Through the courtesy of Dr. F. E. Farmer, I have quoted quite freely from his ward notes, regarding the condition of the patient during his last illness.

Dr. Austin Flint, the elder, once said: "I have never known a dyspeptic to recover vigorous health who undertook to live after a strictly regulated diet, and I have never known an instance of a healthy person living according to a strict dietetic system who did not become a dyspeptic." He also declared that no case of dyspepsia could withstand a tramp on foot through the White Mountains.—*Jour. of Med. and Science.*

TUBERCULOSIS AND ITS THERAPY.

By C. C. Carroll, M. D., Ph. D., New York City.

Tuberculosis is a disease of very ancient origin, co-existent with man as far as man's history has been handed down to us. What method of diagnosis was employed by the ancients to determine the case to be consumption (now known as tuberculosis), we are not appraised, but they certainly recognized the disease, as we find it recorded in Jewish Scriptures, of which mention is especially made in Leviticus 26:16, also in Deuteronomy 28:22, as one of the visitations that came upon that peculiar people, the Hebrews, for the violation of their law. There can be very little question that they regarded this disease, as all other diseases, as an affliction sent upon them for their sins. This opinion may be a mooted question, notwithstanding what was believed; but that this together with other diseases, was the result of violated natural law, there could be little question. The state of health being the normal condition of the race in its primeval age, any departure from that was regarded by the Jews as a special visitation on account of sin. Such a hold had that doctrine or teaching upon the minds of that people that they came some thousands of years after this record of which we have made mention in Leviticus and Deuteronomy to the Christ with a man that was born blind, and they asked him the question: "Master, who did sin, this man or his parents, that he was born blind?" The answer was: "Neither hath this man sinned or his parents that he was born blind, but that the works of God may be made manifest in him." Without going into the theological import of that reply we find its very purpose to be merely the refutation of the doctrine that "All disease is the result of sin." That it is the result of broken law undoubtedly is true. The law was not necessarily broken by the individual suffering, but possibly by some progenitor dating far back some generations before the birth of the sufferer. Regarding heredity, it may be predicated that the father cannot transmit tuberculosis directly to his child, that is he cannot transmit the bacillus tuberculosis, but he may impart a tendency such as a narrow chest, a weak lung or a general constitutional weakness which, under favorable circumstances, might develop the disease, while a mother suffering with consumption may transmit this disease to her progeny, in utero.

Tuberculosis, in certain stages, is easy of recognition. We have certain physical signs of tuberculosis which begin to manifest themselves generally, not in the first, but in what is understood as the second stage of the disease.

I would classify the different stages of tuberculosis as,—first, the *irritative* stage, secondly, the *congestive* stage, third, the *inflammatory* stage, and fourth, the *suppurative* or *cavity* stage. This classification is applicable to any organ that may be infected by the bacilli tuberculosis. Consumption has been regarded as peculiarly a disease of the lungs. The medical profession in the past is responsible for that popular belief, overlooking possibly the fact that tuberculosis may be a disease of any organ. Modern research discloses tuberculosis and cancer to be infections diseases, often closely related, and always exhibited in the blood, and hence hematology furnishes a positive means of early diagnosis. We owe to chemistry and the microscope the revelations pertaining to this and other diseases that marks a period of evolution that is likely to produce an entire revolution in the science of medicine, if it be permissible to call empirical practice a science. Science is defined to be "classified knowledge." To classify it is necessary to *observe, compare, reflect,* and *record.* This the medical profession has been doing as best it could from the days of Esculapius down to the present time, with something of agreement on the part of the leading lights, as embodied in the textbooks and treatises of experienced authors. Nevertheless it is proverbial that doctors rarely agree, and they are honest in their disagree-

ment. This fact of disagreement may be due to the standpoint of the observer. Disease or unhealth, if serious, has many complications presenting so many points of view, each of which might be taken as characteristic or pathognomic of a certain particular disease. Hence, Dr. Jones, looking at a patient from a given point of observation and experience, would be likely to have a different view from Dr. Brown, who looked at the same patient from another point of observation and experience.

The microscope and chemistry, being revealers of exact science, when the medical profession began to use their aid, then true progress in classification began to be made, and now that the revelations of the microscope and chemistry are accepted as authoritative, medicine begins to assume something of a scientific aspect. It would seem as though we were on the threshold, as suggested before, of an entire revolution in diagnosis by the aid of the microscope, which is likely to work some change, if not a radical one, in therapeutics and the practice of medicine. It is now recognized that many of the ills to which flesh is heir are traceable directly to *fermentative* processes induced by micro-organisms, which are fully described and classified by the leading investigators in the medical profession in this and other countries. The genesis, procreation, and habits of these micro-organisms are so well understood by bacteriologists that there is no disagreement among them now, as to the office that they perform in the human economy.

In the human blood we have at least four forms of cell life: 1st, the blood discs proper; 2nd, the white blood corpuscles or leucoytes or phagcoytes, as they are variously called, according to the office they perform; 3rd, haematoblasts, and the fourth form, called stationary cells. These cells which are found in protoplasm are to be differentiated from, and do not belong to the class of micro-organisms, called bacteria or germs. The latter forms of life are of vegetable origin, and are classified according to their form or mode of proliferation, such as: cocci, which means berry-like; bacilli, meaning rod or hair-like, and spirilli, or corkscrew bacteria. Some forms of bacteria are essential to health, and are called physiogneic bacteria, or germs. Other forms are injurious to health and are called pathogenic germs. The bacilli characteristic of tuberculosis, called the *bacilli tuberculosis* are rod-shaped germs with peculiar markings, easily differentiated from other bacteria. This bacillus, like others of its class, proliferates by fission, and that very rapidly, as often as once every thirty seconds a spore is generated from this rod, and each spore then becomes a parent of a new progeny, so that in a period of twenty-four hours we have the enormous multiplication of this bacillus into 16,5000,000, an invading army that is staggering to contemplate. These bacilli are so minute that 100,000 placed side by side would measure less than an inch across. When we learn that this one bacillus is the cause of consumption or tuberculosis, it is not to be wondered at that consumption should be called the universal disease, or the great white plague that preys upon all animated existence, human and animal, in all countries and climes, wherever the sun shines. It is not a matter of wonder and surprise that the disease is so universal when we come to properly understand its nature, mode and rapidity of proliferation and tenacity of life, but the wonder is that there is left upon the face of the globe any living human being. Fortunately we have a friend in the leucocytes called phagocyte that feeds on this bacillus and thus holds it somewhat in check. It is said that something must die in order that something else shall live. This we find true through all realms of nature, both in the animal and the vegetable kingdom. The phagocytes, or white blood corpuscles, come to our aid in fortifying us against this disease; at the same time assist greatly in the use of remedial agents to overcome this disease, called consumption or tuberculosis. Now that we have discovered that this disease is caused by the bacilli tuberculosis, first isolated and described

by Professor Koch, the problem of cure consists of:—first, the destruction of the bacilli that causes the disease; and second, of nutrition, or building up of the wasted form broken down by this disease.

In order successfully to combat this very formidable and destructive disease it is essential that well regulated scientific measures shall be employed, that will embrace, *first,* prophylaxis, or preventive measures; *second,* rational therapeutic treatment after infection has taken place; *third,* stimulating the nutritive or metabolic processes to build up and restore the wasted and broken down structures of the body, be it lung, liver, stomach, bowel, or other organ that may be diseased; *fourth,* proper attention should be given to the development of wasted and atrophied organs, especially the chest, which has been contracted by the disease, should be methodically expanded to accommodate and give free play to expansion of the lungs, in order that deep, full and free breathing may be practical.

INFECTION.

Infection by the bacilli tuberculosis is shown in human blood, even in the first or irritative stage, by the presence of *excess* of *fibrine,* which under the microscope by proper staining is at once recognized by the expert, and affords a ready means of diagnosis of tuberculosis or consumption in the incipient stage, before any serious lesion of the organs has taken place. To this attention should be early directed where exposure to infection is known to exist. Exposure is imminent in all families, where a case of advanced tuberculosis exists, and the members of the family should have their blood examined at frequent intervals by a conscientious, capable hematologist, that infection by bacilli may be recognized, that prophylactic and curative means may immediately be employed, which can and has been done in many cases.

PROPHYLACTIC THERAPY.

The exudates from the lungs and excretion from the bowels and glanular system of consumptives manifest an *alkaline* chemical reaction, which suggests *acid* prophylactic and curative treatment. Following this suggestion, I formulated a very highly *acid* escharotic germicide, that I found destroyed bacilli tuberculosis almost instantly, even when subjected to ten per cent. solution of this acid preparation, and which, after carefully conducted experiments, I found I could pass it into the lungs, uterus, bowels, or any other part of the body infected, without any inconvenience or injury whatever to the patient, resulting in the destruction of the bacilli tuberculosis,and after a few administrations of this germicide, in every case the bacilli began to disappear from the sputa obtained from the lungs, as well as from the excretions from the bowels and uterus of consumptives. The fibrine in the blood also soon begins to lessen, as shown under the microscope. As the result of administrations of this germicide, the patients, even in the far-gone cases, have made complete recoveries.

Now that the doctrine of infection by bacilli tuberculosis is accepted as the true cause of consumption by all the up-to-date thinkers and writers on this and the other side of the water, and that germicides afford a rational method for eliminating the bacilli from the infected patients, there follows as a sequence to the foregoing the query, "What can be done to prevent infection?"

The old adage, "an ounce of prevention is worth a pound of cure" is especially applicable to this subject. It is fitting that all the light possible should be thrown upon the prophylactic feature of our work. The great danger to the family in which an infected member resides, as well as the community, comes through the infection by sputa, both moist and dry. If the sputa contains living bacilli, it can readily be imparted by being carried through the air in fine particles of dust, or can be imparted by inoculation by moist sputa containing live bacilla.

The germicide to which I have referred positively does destroy the bacilli in the sputa, both in the body and out of the body, when it comes

in contact with these bacteria, as has been many times demonstrated. This same germicide affords an efficient safeguard if the atmosphere in the apartment which the consumptive occupies is disinfected. This disinfection is immediately and easily accomplished by the use of an atomizer, spraying ten per cent. solution two or three times daily throughout the room, and will thus preclude the possibility of any one coming in the room being infected.

This feature of prophylactic therapy is of paramount interest and advantage, and marks an epoch in the consideration of tuberculosis that merits the careful, conscientious and thorough investigation by all to whom its merits are brought. This is no guess work, but is based upon positive laboratory clinical demonstration that is easily made and clearly understood by even a novice, to say nothing of the expert in the microscope and chemistry.

I have found electricity to be a most beneficial aid as a therapeutic agent in stimulating nerve centers that are impaired by disease to perform their true office that secures restoration of organic function.

The length of the present paper forbids the discussion at this time of my latest researches in the application of electricity by high ossilation in the treatment of diseases generally and of tuberculosis specially, whereby instantaneous therapeutic results are shown in reduction of temperature, pulse and respiration, without the aid of the usual drugs that are employed for this purpose. As well by this means is the potency of the germicide carried to the liver, or other organs not usually reached direct by drug remedies, in a forcible, positive and efficient manner by cataphoresis.

A logical deduction from the foregoing, based upon a large clinical experience in the treatment of tuberculosis through a series of years, constrains me to say in conclusion that, with a clear understanding of the nature and movement of tuberculosis, the medical profession should no longer, as in the past, hang its hands in an attitude of helpless surrender as it confronts the *great white plague,* tuberculosis, which has devastated the race from time immemorial down to the present time, but should, with the courage of its convictions, seize upon every means now at command and with one united effort, both lay and professional, go forward from conquering to conquer with victory emblazoned on its banner until this terrible malady is stamped from the face of the earth, an event the accomplishment of which is destined to follow at no far distant day the united, intelligent, co-operative work on the part of scientific, earnest, philanthropic men and women now seeking a solution of this great problem.

VACCINATION.

By F. E. Clark, M. D., Burlington, Vt.

INTRODUCTION.

The reasons which led me to choose vaccination as the subject of this paper, are *first,* that small pox has been peculiarly rife in many parts of the United States during the past three years, and that we are now in the midst of an epidemic; *second,* that many of our inhabitants have never been vaccinated while others have reached the age of from 14 to 18 years before such protection has been acquired; *third,* we have had a general vaccination which has caused no end of trouble and dissatisfaction among our people, and as they say is more to be dreaded than the disease itself; and *fourth,* that it involves principles and facts long since established, that are of vital importance to every physician and the community in which he lives.

Inoculated variola was extensively performed in the Eastern Countries very early in the history of small pox, especially in China, India and Turkey, and it was practiced in England and in this country early in the 18th century.

* Read before the Burlington Clinical Society, Jan. 30, 1902.

To mitigate the loss of life and the terrible effects of a disease so much feared, many individuals, in the hope of gaining immunity against future attacks, would submit to inoculation which produced the disease in a less severe form.

The virus was taken from a small pox patient, introduced into the circulation through the skin and it produced a mild form of the disease. It proved to be of great benefit to the inoculated for such cases were rarely fatal. However, the disease so produced, being true small pox, provided a constant source of contagion. This method of immunization conveyed the infection to such an extent that the general mortality was greater than it was before the practice was known. So obvious was this fact that small pox inoculation was made unlawful in England by an act of Parliament in 1840.

At the present time in some of the older New England towns may be seen the ruins of hospitals for the isolation and inoculation of this disease.

EARLY HISTORY OF VACCINIA.

It was not until 1798 when Dr. Edward Jenner of Berkerley, England, made known to the world the discoveries and experiments he had been conducting for twenty years, in the hope of finding a successful method of combatting this most dreaded of diseases. He had noticed that the dairy folks in that section of the country were generally exempt from small pox, and it was from the remark of a milk maid (that she could not have small pox, she had had cow pox) that he got his cue. Those people had contracted the cow pox from sores of the cows teats, affected with the disease, through cuts or scratches on their hands, and in reality this was true vaccination. The experiments of Dr. Jenner proved the correctness of the theory, for two years after, he had inoculated many thousand subjects with the virus of cow pox who afterwards were exposed to small pox without effect.

Vaccinia (cow pox) is a disease of the cow, characterized by the formation of pustules containing a virus which, if properly used, is capable of rendering man more or less immune to the contagion of variola. This disease is produced in man by inoculation with the virus directly from the cow (bovine virus) or from a person who has been inoculated (humanized virus). The disease so produced is not contagious, but is only communicated by inoculation either accidental or intentional.

Vaccination as originally practiced by Dr. Jenner, was on a few selected cases, with the cow pox lymph direct from the animal. The virus so produced (humanized) being transmitted from one person to another, through many generations. This was the nucleus of the Jennerian stock which was afterwards used for 70 years. It was noticed after this long period that the humanized virus or Jennerian stock, had deteriorated and that it did not give the usual immunity as the mortality from small pox among the vaccinated was decidedly on the increase. The consequences might have been most disastrous to the cause of vaccination had it not been for the opportune discovery of a case of cow pox in Beaugency, France, in 1866, from which a new stock of bovine virus was obtained. This stock was brought to America in 1870, and it is probable that all vaccine lymph now in use in this country, is by direct hereditary descent, still the Beaugency stock. It would appear from this that we had simply gone back and learned the lesson anew that vaccine or cow pox produced in man direct from the animal will give an immunity from the contagion of variola and is therefore a sure prophylactic. Certainly vaccination is the only preventative of small pox that is known at present, and I believe there are but few who can doubt the efficiency of this prophylatic measure. If there are such, let them give us something better. Certainly if they will review the discoveries and experiments of Jenner,the results of the use of the Jennerian lymph for a period of 70 years, the development of the Beaugency stock,

and the important service it has rendered in the epidemics of the past 30 years, they will find it very difficult to show good reason why this practice of immunization should not continue.

That cases of small pox have occurred in well vaccinated persons must be admitted, but it happens no more frequently than the disease is repeated in the same individual, which is extremely rare. Dr. Cyrus Edson states that during his service of over nine years in the Health Department of New York, he never saw a case of small pox in a person who had been successfully vaccinated within a period of five years, and that the cases seen numbered into the hundreds.

CHOICE OF VIRUS AND TIME OF VACCINATION.

During an epidemic of small pox two very natural questions confront the physician. First, what kind of virus shall he use and in what form; second, what is the proper time or age for the primary vaccination and how often shall it be repeated?

In answering the first, modern experience is quite unanimous in the substitution of bovine for humanized virus, and in that form originated by Dr. Monchton Copeman, known as glycerinated calf lymph. Young female calves from four to eight months old give the best results in the propagation of virus. They must be perfectly healthy animals. All reliable propagators thoroughly test every animal before it is used to produce the virus, and follow this by a careful post mortem examination. The pulp of the versicle from six to eight days old, after all crusts and extraneous material have been removed, is triturated with glycerin and subjected to physiological and bacteriological tests before it is put upon the market. There are many reliable propagators of vaccine virus. My preference has been for that produced by H. K. Mulford and Frederick Stearns. Others may be equally as good, but I have used the products above stated, with equally satisfactory results.

In answer to the second question I would state that the age of the child and its general health must be taken into consideration. It is a fact that the mortality of small pox in young children is greater than it is in later childhood or adult life. It is also pretty well established that the constitutional disturbances of vaccination are much less in infancy than in later life. Wolff states that of forty-two infants successfully vaccinated during the first week of life, not one showed any constitutional disturbance. A good rule to follow, general health permitting, is to vaccinate the infant before the period of dentition, that is, under six months. By such measure you will observe that we reduce to a minimum the mortality of small pox among children, and only at the expense of but very slight constitutional disturbance as the result of the vaccination. This should again be repeated at about the school age, from eight to ten years, and also a third time during early adult life. If this could be done with the whole population the immunity would be most effectual and a small pox epidemic would be known only in history.

METHODS OF VACCINATING.

Of the many methods that may be employed in vaccination, one all-important fact should always be foremost in the mind of the physician, namely, *that it is a distinctively surgical operation and that the most careful aseptic measures should be employed.*

The two most frequently employed ways of introducing the virus, are by scarifying small areas upon which the lymph is placed and allowed to dry, or by the subcutaneous injection with a hypodermic needle. The former is the more practical for office work or a home to home vaccination. The latter is most advantageously employed in institutions or when large numbers present themselves at one time for the operation. The lymph at present most universally used is the glycerinized, either in sealed capilliary tubes or on ivory points. The parts of the body preferable for the vaccination are the insertion of the deltoid of either arm, or the external surface of the leg at the junc-

tion of the middle with the upper third. The arm is to be preferred because it can be kept quieter and less inflammatory complications are liable to arise, which are frequently present and more or less severe when the leg is vaccinated.

The skin at the place chosen should be rendered *surgically* clean. After washing with soap and water and drying, the site may be again treated with equal parts of alcohol and ether. Strong antiseptic solution had best not be used as the tissues are liable to absorb an amount sufficient to destroy the activity of the virus. All instruments, needles and scarifiers should be sterilized for each operation. Vaccination may be robbed of its terrors by the application of a few small drops of liquor potasse to remove the superficial epidermis. Two or three minutes after the application the superficial epiderm can be wiped off with a bit of sterilized cotton. This will leave a shining surface which does not bleed and upon which the lymph may be allowed to dry.

The lymph may be deposited in three or four places and the skin scratched through the lymph. This scarifying should be done in two directions, covering areas of about ⅛ of an inch square and no blood should be drawn. It has been shown that the least extent of vasciculation absorption, which is capable of affording adequate protection against subsequent invasion of small pox, is an area of half a square inch. To obtain this it is better to make at least four insertions rather than one, for experience has shown that less inflammatory reaction and less permanent destruction of the skin tissues are likely to ensue. One single large scarified area with the same amount of lymph applied as would be used in the four insertions is almost sure to produce much destruction of the skin and leave a large sloughing ulcer which heals slowly and gives the patient no end of pain and annoyance. It can be seen by the accompanying illustration that the extent of tissue destruction depends in a great measure on the size of the scarified areas.

After the lymph has dried the vaccinated area should be protected by a shield of sufficient size to cover the field without touching it. It can be held in place by strips of adhesive plaster and sterilized bandage placed around the arm over the shield. The patient is then excused *but under all circumstances should be advised to return in from four to six days that the physician may see if true vaccination has really been produced, and that no accident has happened to the vesicles.* New dressings and shields should be used from time to time and every precaution employed to prevent any injury to the vesicles until they begin to ooze and discharge serum, at which time they should be frequently dusted with powdered boracic acid and covered with an absorbent dressing. If there is suppuration, the pock should be treated antiseptically, like any granulating wound, and they will be found to be readily healed. Many cases of suppurating, slowly healing ulcers are due wholly to an injury to the vaccine vesicle in the course of its development. The accidental removal of any portion of the capsule, or crusts, allow the injured surface to become infected. Right here I believe the whole secret lies of preventing the disastrous results of a secondary infection. It is most certain that if a disease like tetanus, which is so much feared at present as a result of vaccination, does not manifest some symptom by the fourth or sixth day after the vaccination or before the vesicle was formed, it could not have been introduced at the time of the vaccine inoculation. Again, appearing as it has in all reported cases from two to three weeks after vaccination it can only be explained as a secondary infection, not the result *of vaccination,* but the result of an improperly protected or injured vaccine vesicle.

DIAGNOSIS.

The diagnostic features of a true vaccine sore are seen in its exact similarity to the distinct or separate sore of an unmodified variola. It passes through the same stages, in the same order, and about the same time but may be

larger in size. Accompanying the formation of the vesicle with its areola is fever, anoxeria, restlessness, loss of sleep, slight indigestion, and other symptoms of a general indisposition.

SEQUELAE.

A great variety of post-vaccine eruptions may occur though the most careful precautions have been taken. Even with pure virus we may get urticaria, erythema, and a more or less general vesicle which resembles measles. As the result of mixed infection at the time of the original inoculation, there may be produced impetigo contagiosa, syphilis, and even tuberculosis. Secondary infection of the vaccinated wound may give us tetanus, furunculosis, cellitis and erysipelas.

At no time during the history of vaccination has the surgeon entirely escaped these occasional unpleasant results. But if greater care on the part of the physician is exercised, both at the time of vaccination and its subsequent treatment, many of the accidents will not occur and the operation will be more pleasantly submitted to by the laity.

To recapitulate, I will use the language of Dr. Copeman, who says, that an efficient vaccination, is the clinical activity and bacteriological purity of the lymph employed for vaccination; the skilful performance of the operation itself; the making of an adequate number of insertions of lymph over a sufficient area; the observance of precautions needful for ensuring strict asepsis, both at the time of vaccination and subsequently, until the vaccinated wounds are soundly healed.

To establish the importance of a thorough general vaccination I need to cite but the experience of Germany by enacting a law in 1874 making vaccination obligatory in the first year of life, again at the age of ten. With a population of 50,000,000 and an annual death rate from small pox of 143,000 in 1871, she found that by her law of 1874 it has so reduced the mortality of this disease that it now numbers only 116 victims a year.

SPECIAL THERAPEUTIC ARTICLES

THE THERAPEUTIC APPLICATION OF CHLORETONE.

By Edmond J. Melville, M. D., Bakersfield, Vt.

During the past year I have been using a comparatively new product called chloretone, in cases where a local anesthetic or hypnotic was indicated. The conclusions reached in that time are as follows:

1. Chloretone possesses the good qualities of cocaine and eucaine and can be used in saturated solution without fear of depressing the heart.

2. When used as a dusting powder to lacerated wounds or ulcers prior to operative procedure, it produces complete anesthesia in a few minutes and there is no secondary inflammation following its use.

3. It possesses antiseptic properties and thus acts in many cases in a dual capacity.

4. Where irritation of the "prima via" exists, or in any condition of the stomach or bowels which is aggravated by the ordinary hypnotics, chloretone is especially indicated, as the sedative effect is both local and constitutional.

5. In from 15 minutes to 45 minutes after the examination of an ordinary dose of chloretone the volume of the pulse is increased, the rate lessened, a slight antipyretic and diaphoretic effect may be noticed and the patient is mildly stimulated.

6. Chloretone has no cumulative effect, it is easy of administration and is less expensive than the older local anesthetics and hypnotics.

The following clinical cases will tend to illustrate its usefulness:

Case I. September 4, '01, F. C.—A boy aged six was accidentally cut by a scythe. All the flexor muscles and tendons of the left forearm were divided to the bones at the junction of the middle and lower thirds. Pain and haemorrhage were severe. I dusted the wound

freely with chloretone, and applied compression with hot, moist, sterilized towels, for five minutes. This checked the haemorrhage. Then while the child's attention was drawn from me, I stitched the muscles and tendons with heavy catgut sutures, and stopped all haemorrhage by torsion and ligature. The edges of the wound were united with fine silk; a sterilized dressing was applied and the forearm and hand were fixed, by means of a splint, in a position of aggravated flexion.

The child cried but little during this procedure, and then only at sight of the operation, showing that his distress was caused more by fear than by pain. The wound was dressed every second day for two weeks with a light dusting of chloretone followed by plain gauze and bandage, when it was entirely healed and flexion of the wrist and fingers was found to be perfect.

Case II. N. D.—Aged 32, a blacksmith by occupation, on June 25, 1901, consulted me at my office concerning a foreign body in his eyeball; it proved to be a small piece of steel which was embedded firmly in the sclerotic coat. The eye was bloodshot, and very painful, and there was intolerance of light. A warm saturated solution of chloretone was dropped slowly into the eye. The pain ceased entirely in two minutes, and after waiting three minutes longer I was able to incise the sclerotic coat with a cataract knife and remove the steel with a small forceps. No pain was experienced during the operation. The motion of the eyeball and the functions of the eye were in no way interfered with by the use of chloretone. The anesthetic action of thirty drops of the solution lasted 18 minutes. The eye was protected with plain gauze and a shield for a week, but the patient returned to his employment the next day, as usual. I instructed him to drop a little of the saturated solution of chloretone into the eye whenever it became painful but it was found unnecessary to do so in a few days, as the inflammation rapidly subsided.

Case III. On June 4, 1901, Mrs. W. P.—Aged 34, consulted me regarding painful urination, accompanied by slight haemorrhages. This condition had lasted for six years. A vaginal examination revealed a caruncle protruding from the urethra. The growth bled easily, was very sensitive, and measured about 1¾ inches long and ½ inch wide. It was attached for about half an inch to the floor of the urethra, beginning near the orifice and extending backwards toward the bladder. I advised excision. The patient was adverse to a general anesthetic, so after preparing her in the usual way, I injected thirty minims of a saturated solution of chloretone into the base of the growth. When the caruncle began to lose its bright red color, I grasped it firmly with an artery forceps and commenced gradually to twist it from its base. This caused the patient some pain, when I injected thirty minims more of chloretone solution. In three minutes I was able to excise the pedicle with sharp pointed scissors. The hemorrhage was considerable, but after the application of pure carbolic acid, followed by alcohol, it ceased entirely. The patient was up and about the house on the third day and no recurrence has taken place. The operation lasted about twelve minutes in all, and after the second injection of chloretone solution, was painless.

Case IV. Mrs. D. S.—Aged 48, a widow, the mother of four children, whose family history and habits are good. The patient's health was excellent until within the last six months. She consulted me December 4, 1900, concerning her extreme restlessness. There were slight choreic movements, and obstinate insomnia in spite of the administration of bromides and other hypnotics. A rigid physical examination revealed nothing abnormal. I advised easily digested foods, gentle exercise in the open air, a warm bath followed by cool sponging at bedtime with fifteen grains of chloretone in a glassful of hot milk immediately afterwards. During the day chloretone was given whenever restlessness became marked.

the above medication, combined with a good general tonic, restored Mrs. S. to normal in about three weeks. The restlessness and insomnia were relieved completely and she has had no return of her symptoms upon the discontinuance of the treatment.

Case V. On November 9, 1901, W. W.—Aged 52, a millman, consulted me at my office concerning an atack of sub-acute lithiasis, manifesting itself by swelling, redness and pain in the articulations of the left foot and ankle. He stated that an attack always followed indiscretion in eating and drinking, especially if undue exercise was taken during this time. He was unable to bear his weight on the affected foot. The temperature was 98.5 degrees, pulse 90, and respiration 19. I learned that former attacks usually yielded in about ten days to draughts of litha water, morphia for the pain, sleeplessness and nervousness, and an abstemious diet. Owing to the fact morphia caused retention of urine, I had, at Mr. W's request, substituted different analgesics and hypnotics. These proved unsuccessful. I then gave chloretone in twenty grain doses, four times daily for a week, combined with the use of lithia treatment, hot packs locally, and saline purgatives. This attack lasted the usual length of time and although chloretone did not relieve pain entirely, it had a marked analgesic effect, far superior to that of acetanilid and allied preparations. In allaying sleeplessness and nervousness, in causing no constipation and in my being able to discontinue it without depression when the attack was over, its superiority to morphia was very evident.

THE APPETITE: HOW TO CREATE IT.

A. A. Johnson, M. D., New York City.

The following case is illustrative of many that come under the doctor's care frequently, more frequently now that the Grip has come with us to stay. Even in slight cases of influenza, the effect of this disease upon the nervous system is severe, and the sequelæ are oftentimes prolonged over months before full recovery takes place. Also, the appetite goes; the mere mention of food is repulsive, the stomach simply refusing to act. And, as results show, the weakness, nervousness and anæmia all progress, in spite of the fact that sufficient nourishment is taken, because the stomach does not assimilate; it simply becoming a reservoir, and the food goes in at one end of the body and out at the other, without doing much good in helping crippled nature to assist us in the convalescence.

Mr. G., American, a big, stout man weighing two hundred pounds, was taken ill on January 7, 1902, with a moderate attack of the prevalent influenza. He had all of the typical symptoms, such as chills, aching bones, headache, sore throat, general malaise, with coated tongue, and a general inability to work. Appetite gone, absolutely, and no action on the food that was performed by the stomach. Phenacetin in 15 gr. powders every three hours, a dose of calomel and rhubarb, and plenty of quinine, brought him on his feet in a few days. But still, no appetite; no digestion, with increasing nervousness accompanied with insomnia. Tonics of all kinds were now given, and trinol for the sleep brought only partial relief. For two weeks or more this treatment was kept up, when I was called into consultation. I directed that he should begin with a teaspoonful of thialion dissolved in a cupful of hot water every two hours until the bowels were flushed freely and bilious stools appeared. It took four doses to produce the result, showing pretty conclusively that his liver was badly out of gear, and that the metabolic processes were seriously interfered with.

He was then given one ounce of apetol, and at once, inside of half an hour, he felt his first inclination for food. He ate and it agreed with him—the food was digested, and his spirits began to renew. Apetol was then continued, the same dose three times a day one-half hour before meal time. The result

was apparent at once. His appetite became ravenous, and he was with much difficulty restrained from eating too much.

After the second day of the treatment the insomnia disappeared, the bowels became regular, the nervousness vanished, and in four days he was at work again. He gained strength rapidly, and was soon restored to full health. I really do not know what I should have done without apetol in this case. Its effects were apparent quickly, and an appetite was produced which brought about the most desirable results.

NEWS, NOTES AND ANNOUNCEMENTS

Osteopath Bill Killed in New York.—The joint committee on judiciary of the Legislature of the State of New York gave a hearing on January 29th, and immediaetly after decided not to report the bill favorably. Much satisfaction is felt in regard to this action for the bill was a menace to the community. To give osteopaths full privilege to diagnosticate and treat all diseases, sign birth and death certificates and in fact to have all the rights and privileges of medical practitioners without requiring like qualifications of knowledge, would be a sad commentary on the intelligence of the people of New York.

The American Congress of Tuberculosis.—The Third Annual Session of this Congress is announced to be held on the 14th, 15th and 16th of May, 1902, in the city of New York, in Joint Session with the Medico-Legal Society. There will be two sessions each day and no evening session, except on the 15th, when a banquet will be given.

Arrangements will be made with railway companies for a reduced rate of fare, the details of which will be announced to the delegates.

There will be, aside from all papers of a miscellaneous nature, *four symposiums,* arranged each to occupy one session of the body, viz.: 1. Preventive Legislation, Embracing the Social, Municipal, and State Aspects of Tuberculosis. 2. Tuberculosis in its Pathological and Bacteriological Aspects. 3. The Medical and Surgcal Aspects of Tuberculosis. 4. The Veterinary Aspects of Tuberculosis.

A large number of the enrolled members have already announced the titles of their papers for the session of 1902, and still a larger number have sent their promise to contribute papers and send the titles later.

The Presidents of the Central and South American Republics, and all Governments on the American Continents, have been invited to send delegates and to name suitable persons to act as vice-presidents, and their men of science requested to enrol and contribute to the work of the Congress, many of whom are already represented by delegates.

Those who are named as delegates by the Governors of States, or medical or scientific bodies, for the session of 1901, are cordially invited to enrol for the Congress of 1902. The enroling fee will be $3, which will entitle the member to the Bulletin of the Congress of 1902.

All medical bodies, and scientific or legal associations, or associations of the bar, are invited to send delegates to the Congress, who will be given the rights of the floor and a vote at the session.

The enrolment is open to members of both the legal and medical professions in every State, County or Province on the continents of America, in the western hemisphere, and in American waters, and papers are promised and will be solicited from all who are interested, in foreign countries.

For details, etc., address the secretary, Clark Bell, 39 Broadway, New York City.

RECENT DEATHS.

George E. Dixon, M. D., University of Vermont, Burlington, 1892, died at his home in Milton, Vt., December 20.

Leroy A. Merrill, M. D., University of Vermont, Burlington, 1882, for many years a practicing physician of Lonsdale, R. I., died at his home in that village, December 23, from typhoid fever, after an illness of three weeks, aged 46. He was a member of the Pawtucket Medical Society and the Rhode Island Medical Society, and was coroner and health officer of Lonsdale for several years.

Andrew Gilroy, M. D., University of Vermont, Burlington, 1884, a practitioner of Jewett City, Conn., died at the home of his mother in Norwich, Conn., from consumption, December 12, aged 38.

Clinton S. Chase, M. D., Castleton (Vt.) Medical College, 1854, died from pneumonia at his home in Detroit, December 15, aged 70.

Ether Compresses in Strangulated Hernia.—George, in *Jour. des Pract.*, reports two cases of strangulated hernia in which he could produce no effect by taxis. He saturated compresses with ether and applied them to the parts and at the same time produced moderate taxis. After the compresses were kept in position for several hours reduction was accomplished without much difficulty.—*Amer. Med.*

Dr. R. A. Carter, Lyndon Centre, Vt., was married to Miss Grace M. Densmore of St. Johnsbury, Vt. Dec. 10th, 1901.

Dr. J. F. Kendrick, West Charleston, Vt., was married to Miss Rose Sherburne of Glover, Vt., December 4th, 1901.

New Health Officer for Winooski.—Dr. E. A. Burdick has been appointed Health Officer of Winooski, succeeding Dr. O. W. Peck, whose severe illness has caused him to relinquish the duties of the office.

The Attending Staff of the Mary Fletcher Hospital.—The attending staff of the Mary Fletcher Hospital, Burlington, Vt., have been appointed for the ensuing year, as follows: *Medical*—Dr. H. R. Watkins, Dr. W. R. Prime, Dr. P. E. McSweeney; and *Surgical*—Dr. D. C. Hawley, Dr. J. B. Wheeler, Dr. H. C. Tinkham, and Dr. S. E. Maynard; *Surgeon in charge Eye, Ear, Nose and Throat*—Dr. M. C. Twitchell.

The Attending Staff of Fanny Allen Hospital.—The attending staff Fanny Allen Hospital, Burlington, Vt., have been appointed for the ensuing year, as follows: *Medical*—Dr. C. M. Ferrin, Dr. Lyman Allen, Dr. C. A. Pease, and Dr. J. W. Sheehan; *Surgical*—Dr. O. W. Peck, Dr. D. C. Hawley, Dr. P. E. McSweeney, and Dr. W. G. E. Flanders; *Surgeon in charge Eye, Ear, Nose and Throat*—Dr. H. Edwin Lewis.

Burlington Clinical Society.—The regular monthly meeting of the Burlington Clinical Society was held at their rooms 162 College street, Friday, January 31, 1902, at 8.30 P. M. The program was in the nature of a symposium as follows:

The Medical Treatment of the Diseases of the Female Pelvis.

Diseases of the ovaries and tubes, Dr. H. C. Tinkham.

Diseases of the uterus and vagina, Dr. C. K. Johnson.

Diseases of the bladder and urethra, Dr. W. A. Lyman.

A paper on Vaccination, by Dr. F. E. Clark, was also read.

An amendment to the constitution was presented, changing the name of the Society to the Chittenden County and Burlington Clinical Society, and making such other alterations as will bring the Society into affiliation with the re-organization of the State Medical Society. At the close of the business meeting, refreshments were served by the Executive Committee and a very pleasant social hour was spent by the members present. The attendance at the meetings of the Society is improving, but every physician in the County of Chittenden ought to make it a point to regularly attend and take part in the discussions. The benefits that can be thus obtained will far exceed the time and labor spent.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

H. EDWIN LEWIS, M. D., *Editor.*

FRANK C. LEWIS, *Business Manager.*

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Burlington, Vt., February 25, 1902.

EDITORIALS.

MEDDLESOME SURGERY.—Surgical methods and ideas have really dominated medical science of the last quarter century. It is certain that no other one factor has been more potent in overcoming disease than the wise use of surgical procedures, and it is equally certain that the present high status of medical science is the result of the accurate, scientific tendencies of modern surgery. But as with almost every other beneficent institution abuses have crept in, and surgery in the hands of the incompetent, indiscreet or unscrupulous practitioner has presented real and tangible dangers. The temptation to do brilliant or startling work, to lead one's competitors or to possess a record of many operations, has led too many surgeons beyond the pale of real, honest surgery.

The opportunities for surgery have been most numerous in the field of gynecology, and as a consequence abuses have been most frequent in connection with diseases of women. Countless women have been sacrificed or subjected to the dangers of really serious operations without any other substantial reason than operative zeal. In this connection it is perhaps wrong to speak of certain operations as belonging to the realm of fads, but there can be little doubt that many a woman has been drawn into the vortex of surgery through popular suggestion.

The foregoing does not apply to the honest, conservative, conscientious surgeon. When a medical man who conforms to the ideal of what a surgeon should be, advises or undertakes an operation, he does so only after due consideration to his patient's present condition, the actual needs of operation and the probable results. The surgeon who falls short of this ideal, ignores his patient, and advises or undertakes an operation with regard only to his own pocket, record or ambitions. The evil and harmful influence of this kind of surgery is being demonstrated daily to every physician, in the needlessly large number of women on our hands, who having run the gamut of operative procedure during the last decade, are doomed to ovaryless or wombless invalidism. It is hard to say that less surgery and more attention to hygiene, physiology and commonsense, would have saved a good many of these emasculated wrecks, but the growing tendencies of modern surgery along the line of conservatism would seem to justify such a statement.

Therefore, it is neither narrowness nor bigotry to say that surgery to fulfill its mission, must be honest and used,—not for the surgeon, but for the patient. If an operation is undertaken after all other measures have been eliminated by trial or experience, with due regard always to necessity and the probable results, it is honest and scientific. If not, it belongs to the domain of meddlesome surgery, and as such should be condemned by every conscientious physician as pernicious, unscientific and extremely liable to bring the science of surgery into bad repute.

SOME FACTS RELATIVE TO THE WORK OF THE VERMONT STATE LABORATORY OF HYGIENE.—The good people of Vermont have no conception of the amount and quality of work that is being done in the State Labora-

tory of Hygiene. Since the inauguration of this institution in 1898, it has more than justified its establishment, and the incalculable aid it has given to the physicians of the State in the early detection of contagious forms of disease, has gone far beyond the hopes of the Laboratory's most sanguine supporters. The specific assistance given by accurate examinations and prompt reports of diphtheretic material has enabled health officers to maintain more rigid quarantine as long as any danger remained, and the many analyses of sputum made, must certainly have proven of marked service in the struggle with tuberculosis.

One of the most important branches of the Laboratory's work has been the quarterly examinations of the public water supplies of towns throughout the State. In this way definite information is constantly and frequently available relative to the purity of each town's water supply, and the vast help which these regular examinations have been to local health authorities cannot be estimated in dollars and cents. In many instances serious epidemics have been avoided by early detection of contamination of the water supply, and in others, possible danger has been demonstrated to local authorities enabling them to eliminate sources of contagion early enough to avoid trouble. Few people besides those who have been brought face to face with these problems, realize the importance of the Laboratory, for the work is being done so quietly and unobtrusively that little is heard of it. But the work of the Laboratory has rapidly increased during the past year and it is evident that at least the physicians of Vermont are alive to the advantages and benefits of this excellent institution.

To those who are familiar with what the Laboratory is doing it seems evident that Vermont could have made no wiser investment than the annual appropriation of $10,000. It is impossible to place a monetary value on the benefits that have accrued to the people of the State, but argument is unnecessary to show that these benefits have been many and of the utmost importance to the public health of Vermont.

We take pleasure in presenting herewith a table from the report of the Director, Dr. M. J. Wiltse, showing the actual financial value of the examinations made at the Laboratory during the past year. The value of the examinations made during the two preceding years, January, 1898, to December, 1900, was $37,988.00, so it will be seen that a very substantial increase has been made throughout 1901.

Table showing money saved State of Vermont by examinations made at Laboratory of Hygiene. From December 1st, 1900, to December 1st, 1901.

796	Diphtheria analyses at $2.00	$1,592 00
639	Typhoid analyses at $2.00	1,378 00
957	Sputum analyses at $2.00	1,914 00
57	Malarial analyses at $2.00	114 00
853	Water analyses at $25.00	21,325 00
45	Beer analyses at $5.00	225 00
20	Milk analyses at $4.00	80 00
11	Tissue examinations at $5.00	55 00
58	Miscellaneous Bacterial examinations at $2.00	116 00
9	Miscellaneous Chemical examinations at $5.00	45 00
12	Medico-Legal cases	1,875 00
26	Whiskey analyses at $5.00	130 00
3483	specimens examined during the year 1901	$28,849 00

It is interesting to note in connection with the amount for medico-legal work, that Vermont is the only State in the world where medico-legal examinations are being made under State supervision in a State institution.

Outside of Vermont people are inclined to look on the State as a rural, backwoods community. But if there is any doubt concerning the high status of medical affairs in our State, it will be dispelled at once by a careful examination of the Vermont State Laboratory of Hygiene,—an institution made possible by the forceful enthusiasm of an efficient Board of Health and the undivided support of the medical men and intelligent people of Vermont. Through the same influences it is destined to continue and grow in usefulness with each year.

Slandering the Doctor.—Of all men on earth the physician is probably the one most frequently maligned. That is in regard to his

character and morals. It is no exaggeration to say that the majority of all physicians sometime in their career have some wicked, wilful slur cast on their reputations. Many times these slurs are only hints or innuendoes to the effect that Doctor So and So is too fond of Mrs. A—, or too friendly with Mrs. B.—, but it does not take long for these veiled suggestions to grow to the well developed proportions of actual immorality in the minds of the receptive.

Some simple act of imprudent kindness on the doctor's part may start the avalanche of gossip and ere he know it he is socially damned and condemned. The injustice of such condemnation is evident but it is rife in every community. If the doctor stays a little longer than usual in making a professional call on Mrs. A—, if he stops and speaks to Miss B— on the street, or if he is observed giving Mrs. C— the courteous attention of a gentleman in his office, the scandal-seekers are ready forthwith to draw their own conclusions, and it is needless to say that they are seldom complimentary to the doctor.

Ninety-nine times out of a hundred these false inferences have their inception in the mind of that most industrious ally of His Satanic Majesty—a jealous or spiteful woman. Thank God, the majority of womankind are pure and good, but the Devil has a class all his own made up of the jealous woman, the spiteful woman and that social cess-pool, the gossip. To them he delegates a large share of his work and they do it so well that most of the unhappiness and discontent of our beautiful world is due to their machinations. Therefore just so long as they do business at the same old stand, the doctor will have to stand his share of their shafts and venom, and alas it is a large one.

But in the name of justice and decency we wish to protest against the judging or condemning of any doctor on the "say so" of this class. When he is thus attacked, honest, fair minded people ought to consider accuser and accused. If if they will do so and simply remember the average doctor's devotion to his profession, the great bulk of work he cheerfully does knowing he will get no adequate return, the danger he constantly runs from hardship and exposure to all kinds of weather, the hours he toils while others sleep, and above all the love he bears for his own dear ones, *there can be but one verdict.* If they think of these things and remember the man to whom they trust their loved ones, their lives and their secrets, they will realize that the average doctor is not only as good as the average man, but from the very nature of his calling that he is often a little better.

EDITORIAL NOTES AND CLIPPINGS.

The Fascination of the Practice of Medicine.—There is something intensely fascinating about the practice of medicine. The diagnosis of disease, the application of remedies, the marvels of surgical treatment,and the difficult questions of prognosis all present intensely interesting phases of medical science that appeal to the man who is fond of overcoming obstacles. And what man of character is not? Go into a medical society meeting and listen to some hoary headed practitioner recite the history of some case that puzzled or interested him. Note his satisfaction in trying to interpret or unravel the clinical signs, and say if you can that he has lost his interest in disease. He never loses it and it is the rarest thing in the world for a practitioner to forsake his profession. Is there any other class of men who stay so long in the harness? It does not seem so, and the average physician certainly has no more to fear from "the wolf at the door" than the average clergyman or lawyer. No, it is not necessity, but the fascination of medicine, the struggle against a subtle force in the face of difficulties sometimes surmountable, sometimes insurmountable, that makes a man once a physician, always a physician.

A thorough knowledge of the principles of physical diagnosis is as important to the surgeon as to the physician. If this accomplishment was more general, we believe there would be fewer unnecessary exploratory incisions and punctures. The art of surgery is not alone in absolute cleanliness and the skillful handling of instruments, but also in the ability to make a correct diagnosis, to judge wisely, and to act conservatively. Indeed, in these latter respects, we may perhaps find something left to learn from the surgeons of a former generation. We have sometimes thought that in the higher order of practice, the physician and surgeon should be united, and that the separation in the departments of internal medicine and surgery is somewhat artificial. In other words, perhaps every good surgeon should also be a good physician.—*The Post Graduate.*

Christian Science.—If th' Christyan Scientists had some science an' th' doctors more Christyanity, it wuddent make anny difference which ye called in—if ye had a good nurse.—*Mr. Dooley.*

Kind Words.—The many expressions of congratulation we have received relative to our January issue from friends all over the United States and Canada, are very gratifying and encouraging. To all who have seen fit to tender kind words, we extend our hearty thanks. Your interest in the Vermont Medical Monthly has helped us a great deal more than you know, and it will be our earnest effort to make our publication better with each issue. We solicit the support of every man who has an interest in medical progress.

Notable Contributions.—In this issue will be found several articles that we believe are notable contributions to medical literature. Dr. Berry's paper on "Pernicious Anaemia" is of great scientific value and certainly adds important data to the subject. The rest will take high rank with articles in any journal in the land.

No More Free Copies.—After this month no more copies, except occasional samples, will be sent to non-subscribers. We have a large list of *bona fide* subscribers throughout northern New England, New York and Canada, and in addition a number in every State in the United States. We are proud to say that we are independent and if a man does not want the Vermont Medical Monthly enough to say so, we shall not send it to him. Our list is large enough and growing fast enough, without the need of bolstering it up with deadheads. We intend to give a journal that local physicians will be proud of, and we know that the honest, strong medical men of our State and locality will stand by us. The others we can get along without.

MEDICAL ABSTRACTS.

Sodium Cacodylate in Tuberculosis.—In an article on The Therapy of Tuberculosis (Therap. Monthly, 1, No. 5) Dr. T. L. Coley says:

"Of the newest drugs, cacodylic acid derivatives have been given an extensive trial. Arsenic forms a series of compounds with alcohol radicals, and one of them is arsendimethyl or cacodyl. Cacodylic acid is derived from cacodyl, and in the form of sodium cacodylate has been recently introduced in therapeutics. This latter salt is an organic compound containing about 50 per cent. of arsenic. The remedy may be used internally and subcutaneously. The chief advantage consists in the freedom from the toxic by-effects of ordinary arsenic preparations.

In tuberculosis excellent results are obtained with rectal injections of sodium cacodylate during the so-called pre-tuberculous stage. In advanced stages of the disease the drug acts less satisfactorily. The remedy is best given hypodermically, as follows:

Pure Sodium Cacodylate	2½ dr.
Carbolized Alcohol	10 drops
Distilled Water	3½ oz.

This mixture is boiled a short time, made up to 3½ oz. with distilled water, and kept in a sterilized vessel.

Each cubic centimeter contains 1 grain of cacodylic acid, which is the proper beginning dose, to be given once in twenty-four hours, and increased, if necessary, up to four times the amount. After eight to ten days the injections are interrupted. As contra-indications to this treatment should be mentioned: phthisis in the third stage, and hepatic insufficiency, the latter being an absolute contra-indication. Some consider the remedy very valuable in those predisposed to tuberculosis. In conjunction with a generous diet, and, according to Gautier, with iodine as an adjuvant, it gives good results.

Diagnosis of Perforation in Typhoid Fever.—Dr. Hugh M. Taylor, in an article on *Typhoid Perforation* (*N. Y. Med. Journal*, Feb. 1, 1902), says the following in regard to diagnosis:

"The diagnosis of perforation, on the one hand, may be exceedingly obscure, and, on the other, the clinical picture may be easily interpreted. The symptoms of typhoid fever are so variable. In a large number of fever cases the patients are perfectly clear mentally, they can warn us intelligently of the sudden onset of pain and can help us to decide when it is localized or diffused. In many, the thermic changes are gradual and no sudden rises or falls occur, and the same is true of the pulse. In many, abdominal pain is absent and there may be no distention or rigidity. In this class of patients, and they are by no means a minority of cases, such a group of symptoms as vomiting, pain, shock, increased and increasing pulse rate, abdominal rigidity, distention and abolished peristalsis and gaseous movement, together with, perhaps, a reduced temperature incident to shock, should enable us to make about as positive a diagnosis as is possible in a majority of acute intra-abdominal troubles. On the other hand, in another group of cases, in which there is mental apathy, not infrequent vomiting from impaired stomach digestion, distension from nerve exhaustion and intestinal indigestion, rapid pulse, high temperature, frequent paroxysms or persistent pain from peritoneal involvement with perforation—in such cases the diagnosis must call for an acute reading of symptoms manifested."

BOOK NOTICES.

Notes on Uranalysis and Clinical Microscopy, by B. H. Stone, A. B., M. D. Bacteriologist Vermont State Laboratory of Hygiene, Burlington, Vt.; F. L. Lane & Co., printers, 1902. Price:

This little book as a handbook for laboratory use cannot be excelled. It is brief but remarkably complete. The author has carefully avoided all superfluous explanation and discussion, with the result that his book is just what it purports to be, a manual of laboratory tests and technique, and not a hybrid text book and manual as is so often the case with books of this kind.

Under each test or examination the best method is placed first; following which are others to be used when confirmatory evidence is required.

For student use the book will be found especially valuable and the concise presentation of each test will facilitate rapid and accurate work. The general practitioner with time only for occasional laboratory work will find the book a handy guide for quick reference, and in it under a proper heading he will find just what he wants.

Dr. Stone's book is essentially up-to-date and fills a real need, hitherto existing, for a practical authentic working manual of every day laboratory methods. It is neatly bound and in every way a credit to the author.

THE DIAGNOSIS OF NERVOUS AND MENTAL DISEASES. By Howell T. Pershing, M. Sc., M. D. Professor of Nervous and Mental Diseases in the University of Denver; Neurologist to St. Luke's Hospital; Consultant in Nervous and Mental Diseases to the Arapahoe County Hospital; Member of the American Neurological Association. Illustrated 12mo. Philadelphia: P. Blakiston's Son & Co., Publishers, 1901. Price, in cloth, $1.25.

The general practitioner will find this work a valuable aid in unravelling the difficult and intricate problems presented in the differential diagnosis of nervous and mental diseases. Neurology has always been a bugbear to the man who was not a special student of pathologic conditions of the nervous system, and as a consequence diseases of these structures have rarely received appropriate or thorough treatment.

This book will facilitate accurate diagnosis and cannot fail to give a broader and more adequate idea of these diseases. It should be in the hands of every general practitioner.

HOGAN'S NERVE.

"I hear Hogan is sick," said the barber.

"Yes, but he's better now," said the bailiff. "He went to a doctor, who looked him over and then wrote out a prescription.

" 'How much will that cost, doc?' asks Hogan.

" 'About a dollar and a half,' says the doctor.

" 'Have you got that much to loan me, doc?' says Hogan.

"The doctor took the prescription back and crossed off all the items except 'aqua pura.'

" 'You can get that for ten cents,' he says, handing it back to Hogan; 'and here's a dime.'

" 'Don't I have to take those things you scratched off?' asks Hogan.

' "No,' says the doctor. 'Those are nerve tonics. You don't need 'em.' "—*Med. Brief.*

STRAY THOUGHTS

From Everywhere, by Everybody and for Everyone who Wants to Read Them.

THE TICK OF THE CLOCK, A REVERIE OF A LIFE.—"Tick, tick, tick, tick, and I see the grace of love and youth, of silence and of dawn, making a picture divine. The father mingles his tears with those of the happy mother, but they are tears of joy, for a soul is coming into life. The nurse gayly cooes the helpless thing. The infant cries lustily, and looks with startled eyes at those about him, reaches out his feeble hands and cries again. He is placed on the white, blue-veined wells of life, and taught by a mother's caress and voice to dine and sleep. He now craves only warmth and the tender touch of a woman's hand. Above the low love talk of the mother and the rhythmic ticking of the clock, I hear the doctor sheerily say, 'He's all right now.'

"Tick, tick, tick, tick, through the alternating days and nights and months and years, and I see him with top or bat and ball at play in field or wood, or plashing in the brook, having more life than even joy can use with prudence, hunting for no excuse why he should be, or why the world should be, but deeming himself a reason why world systems should be builded.

"Tick, tick, tick, tick, through the ebb and flow of years, and he is grown to man's estate. The top, nor bat and ball, nor brook have little entertainment for him now. He holds a throbbing heart against his own, and seals with a holy kiss, love's compact, thus solving the riddle of the pessimist. Yet with each tick of the clock Death takes one step nearer to him and to the one of all the world he has wooded and won, but he heeds it not. Conscious of his power, he longs to brave the buffetings of life, and place upon his breast the badge of fame. Courted by flattery and brazen proffers of friendship; encouraged by factitious ties of wealth and place; of reputation and love of wife and child, he strides dauntless through the world with a buoyancy and independence that overrides all doubts and dangers, as sea waves break o'er sunken rocks.

"Tick, tick, tick, tick, through sun and shade, and anxious days and sleepless nights, seeing himself stripped of his hoarded gold and the luxuries of life, discovering at last the dishonesty of those he once called friends; learning that the world looks upon failure with indifference or abhorrence, and tolerates misfortune only to turn it to its own account for a selfish purpose.

"He finds himself bound for weary days and nights upon a bed of pain, babbling secrets that he has cherished long, believing that the whole world begins at his pillow and ends at the foot of his bed, but tick, tick, and his bleared eyes look out upon a wider sphere. He sees his wife bending over him and feels her loving kiss pressing his weary eyelids down, while her soft hands cool the fever of weeks and charm the pain away. Once more hope and health are his. Resolutions again fill his grateful soul, and energy and courage, stimulated by his dependent loved ones, take him back into the war of life.

"Tick, tick, tick, tick, and the shuttle of Time weaves into the fabric of years the white threads of age. I see another divine picture, but it is the grace of love and age, of silence and of night. There are tears now as then, but they are tears of sorrow, for a soul is going out of life. The nurse gravely moistens the lips of the helpless thing. The old man looks with startled eyes at those about him, and again reaches out his feeble hands. He shivers, and now, as then, craves only warmth and the tender touch of a woman's hand. Above the low sobs and the loving words of her whom he has worshipped and adored, and the relentless ticking of the clock, I hear the doctor sadly say, 'He's all right now.' "—George F. Butler in *Doctor's Magazine.*

OPPORTUNITY.

Master of Human Destines am I!
Fame, love and fortune on my footsteps wait.
Cities and fields I walk; I penetrate
Deserts and seas remote, and passing by
Hovel and mart and palace—soon or late—
I knock unbidden once at every gate!
If sleeping, wake—if feasting, rise before
I turn away. It is the hour of fate,
And they who follow me reach every state
Mortals desire, and conquer every foe
Save death; but those who doubt or hesitate,
Condemned to failure, penury and woe,
Seek me in vain and uselessly implore.
I answer not, and I return—no more!

—By Jno. J. Ingalls in *Saturday Evening Post.*

"It takes great strength to bring your life up square
With your accepted thought and hold it there;
Resisting the inertia that drags back
From new attempts to the old habit's track.
It is so easy to drift back, to sink;
So hard to live abreast of what you think!

It takes great strength to live where you belong
When other people think that you are wrong;
People you love, and who love you, and whose
Approval is a pleasure you would choose.
To bear this pressure and succeed at length
In living your belief—well, it takes strength,
And courage, too."

Charlotte Perkins Stetson.

THE NEWER REMEDIES.

Grippal Cough-Laryngitis-Bronchitis.—In these affections, antikamnia is indicated for two reasons: First, because of its absolute power over pain; at once removing this element of distress and placing the whole system in the best possible condition for a speedy recovery. And second, because of its power to control inflammatory processes, lowering the fever by its peculiar action on the nervous system. Codeine is strongly indicated because of its power as a nervous quietant, often quickly and completely controlling the cough. In nervous coughs, irritation of the throat, laryngitis, bronchitis and phthisis, where the cough is altogether out of proportion to the amount of expectoration, antikamnia-codeine tablets will give prompt satisfaction. In fact, in cases of nervous coughs,irritable throat, so commonly attendant upon influenza and la grippe, as well as in sub-acute laryngitis, and slight bronchitis, this tablet alone will often so control the cough that the disease rapidly subsides. This is not strange when we remember that nothing could keep up this irritation more than constant coughing. In the more severe cases of bronchitis and in phthisis, the patient is not only made more comfortable, but the disease itself is brought more directly under control by checking the excessive coughing, relieving the pain and bringing the temperature down to the normal standard.

Sanmetto in Genito-Urinary Diseases.—Dr. B. G. Inman, of Bradford, Ohio, writing, says: "I have used Sanmetto and find that it is all that one could desire in the treatment of urinary diseases. With an experience of thirty-eight years of practice I know of no medicine that is more direct in its action in all cases of senile prostatitis and other genito-urinary diseases. I regard Sanmetto as one of our best vitalizing tonics to the reproductive organs, which gives it a wide range of useful-

ness in the treatment of many nervous troubles."

DYSMENORRHEA.—In the congestive type of dysmenorrhea, in which the painful menstruation is usually due to some inflammatory condition of the pelvic organs, especially the uterus, much benefit is derived from intra-vaginal applications that will relieve the engorgement of the parts. Tampons soaked in glycerine and boric acid, or iodine, or ichthyol have been largely used, for this purpose, but this has only been in the absence of something better, since the inconvenient and disagreeable nature of the tampon treatment has always been recognized. The modern way of accomplishing the same purpose in a far more efficient, cleanly and convenient manner is by the use of Micajah's Medicated Uterine Wafers.

They are easily introduced into the vagina, are unirritating and do not require removal. Their ingredients are gradually liberated, exerting an astringent, antiseptic and anticatarrhal action upon the congested and inflamed parts. The congestion is relieved, the circulation regulated, the absorption of exudates promoted and the dysmenorrhea thus permanently removed.

THE TREATMENT OF LEUCORRHOEA.—As an antiseptic for leucorrhœa, Tyree's Antiseptic Powder has a wider scope of usefulness than any product now in use. The usual antiseptics and astringent douches require to be used with great discrimination in order to prevent toxic effects. Tyree's Powder, on the other hand, is entirely safe for all forms of leucorrhœa. It acts directly upon the vaginal canal which abounds in mico-organisms, by correcting the acid reaction of the vaginal secretion, and renders the parts especially unfavorable to the multiplication of the germ that produces leucorrhœa. It dissolves the diseased mucous, thereby setting free the imprisoned glands, stimulating them to resistance of further invasion of the germs. Hospital statistics show that, with the use of this powder, the morbidity is diminished, and the mortality statistics are decidedly more favorable.—*Ex.*

MARTIN H. SMITH COMPANY, 68 Murray Street, Ney York. Being constantly in the treatment of a considerable number of phthisical hospital patients, it is in order for me to state, that in the persistent cough so harassing to the patient, and preceding or accompanying "Pulmonary Hæmoptysis, or Hæmorrhage" I have found "Glyco-Heroin" (Smith) an invaluable remedy, applicable in the vast majority of cases of phthisis pulmonalis, and far preferable to combinations of morphia or codeia. I also find this happy combination exceedingly valuable in the troublesome, dry, so-called stomach cough following la grippe, and supposed to be dependent on irritation of the pneumo-gastric nerve. Chs. Brewer, M. D., Resident Physician, N. J. State Prison.

THE PREVENTION OF OPHTHALMIA NEONATORUM.—In an article on the prevention of ophthalmia neonatorum, Dr. Lucien Howe, of Buffalo, (*Philadelphia Medical Journal,* January 18, 1902), whose name is so prominently identified with this subject, urges the enactment of laws which will make it compulsory upon the practitioner to adopt some form of prophylaxis against this disease, which is responsible for so many cases of blindness. He cites statistics by Kostling, showing that in 17,000 births where no prophlyactic treatment had been employed some trace of ophthalmia developed in over nine per cent., whereas in 24,000 children treated by the Crede method the number who developed the disease was only one-half of one per cent. The Crede method, however, has the disadvantage of always producing some pain and usually more or less conjunctivitis, while in a few instances it has given rise to corneal ulceration. According to the statistics of Piotrowski, in 1,030 children treated

with a strong solution of boric acid and a ten per cent. solution of protargol not a single case of ophthalmia occurred, while slight catarrhal conjunctivitis was observed in only 1.2 per cent. Aside from the numerous favorable reports on the value of protargol as a prophylactic against this affection by European authors, the drug is preferred for this purpose by many ophthalmologists in this country, including Drs. Alt, Peck, Cheney, Fox, Hotz, Zimmermann, Converse, and Todd. In commenting upon Dr. Howe's paper the *Philadelphia Medical Journal* remarks editorially: "If we cannot reach the fons origo of ophthalmia neonatorum, we can at least save the frequent offspring from a life of darkness, and protect the community from a source of burden and expense. That this can to an enormous extenc be accomplished by prophylactic instillation need hardly be repeated, and its negligence constitutes a sin of omission that deserves commensurate punishment. The enactment of such a law is feasible, its interpretation obvious, and its enforcement not difficult, provided the accoucheur receives the intelligent support of an intelligently instructed community."

The Curability of Syphiliss Gottheil. (Author's Abstract).—Speaking of the curability of syphilis in the symposium upon that disease in the October number of the *International Med. Magazine,* Wm. S. Gottheil, of New York, takes exception to the opinion of its practical incurability which is prevalent in certain quarters. Every day experience shows that the great majority of cases are cured in every practical sense, the occasional late relapses and accidents to the contrary, notwithstanding. He concludes:

1. Syphilis is a curable disease, and may even, with restrictions, be called a self limited one.

2. Whilst cure in a given case cannot be affirmed with scientific accuracy, the chances of its being the fact after a certain time under proper treatment are so great that it may be properly claimed to have been effected.

3. Practically, a patient who has been properly treated throughout the active stages of the disease, and who has had no manifestations of its persistence for several years thereafter may be regarded as cured, and may be told so.

Average Length of Life.—We are rapidly gaining in the average length of human life. Better sanitation, the enforcement of precautions against contagious and infectious diseases, and the advancement of surgery and medicine, are causing an even more rapid reduction of the death rate than the layman might guess. The census bulletin of deaths that occurred in 271 cities of 5000 population or more shows that 18.6 persons died in 1900 out of every 1000, whereas in 1890 the number who died in the same cities was 21 out of every 1000. The average age at death in 1890 was 31.1 years. In 1900 it was 35.2 years. If these statistics be accurate, the saving of human life that has been achieved in a decade is enormous.

Ice applied to the external genitals—the scrotum in men, the labia in women—is said to be the best and simplest method for controlling blood-spitting and nosebleed.

A Prize Contest.—We take pleasure in calling the attention of our readers and the profession of Vermont to the liberal offer of the Maltine Company in their Prize Essay Contest.

The prizes offered are so large as to be worthy the best efforts of any physician and the subject chosen is of such importance and range that every physician, each in his own way, can find something interesting and instructive to say about it.

The judges are physicians of such well known reputation and scholarly attainments that confidence will be felt in their decisions and every contestant can feel assured that the principles inaugurated by the donors are carried out with justice and fairness. See Maltine advertisement.

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ORIGINAL ARTICLES

REMARKS ON THE ETIOLOGY AND PATHOLOGY OF NEPHRITIS.*

By M. J. Wiltse, Ph. G., M. D.

Director Vermont State Laboratory of Hygiene, Burlington, Vt.

The subject for this evening is such that we can not presume to cover it wholly. When one simply mentions kidney, he has found a subject which means a great deal to the practitioner of medicine. While there is much known of this organ histologically, we know comparatively little pathologically, and still less of the etiology of nephritis. The structure of the kidney and its function is one of the most complicated of any organ in the body, and when we think of its functions, it is not surprising that we are called upon to treat the many disturbances which exist. To confine ourselves strictly to the subject, would be impossible for I must ask you first of all to call to mind the complicated structure of the kidney; the three distinct sets of capillaries and the blood pressure in each differing: the four different kinds of epithelial cells which perform their respective functions. With these conditions existing, we can not be surprised at the arrangement of the vessels and tubes, and the variety of cells, if we consider the divers duties the organ has to perform. It has to rid the blood of all impurities whether the result of normal or pathological change: it eliminates all injurious, useless or superfluous matter whether colloid or crystalloid, soluble or insoluble, alkaline or acid: all are expelled that tend to alter the normal composition of the blood, and I think it may be safely stated, that we do not know in what particular part of the gland this work is done. Be that as it may, the kidney is called upon for an enormous amount of work, and it is not surprising that complications arise as a sequela to the many ailments of man. Therefore what can be said as to the etiology of nephritis? Here are a few of the causes which are given by some of the leading practitioners:—

Exposure, cold, irritating medicine and prolonged use of others, pregnancy, neurasthenia, scarlatina, diphtheria, gout, cancer, cystitis, infectious diseases, syphilis, malaria, alcoholic excesses, opium habits, chronic mercurialism, phthisis, hepatic disorders—in short this list covers a good share of the ailments of man. I could have saved time by suggesting at the outset that we look out for nephritis at all times as a complication in all diseases. It will be impossible for us to go over in the time allowed all of the etiology and pathology of nephritis. We may begin with, what is considered to be the correct classification.

First there must be the acute, and second the chronic nephritis.

Under the head of the acute we have the

Acute congestion,
Acute degeneration,
Acute exudation,
Acute diffuse.

Under the head of chronic we have the

Chronic congestion,
Chronic degeneration,
Chronic diffuse with exudation, and the
Chronic diffuse without exudation.

To consider the etiology of each is impossible, but we can make what would seem to be a broad statement. Nephritis may be caused by almost any derangement of the physiological anatomy, consequently look for it at any and all times. The causes for acute congestion of the kidneys are many. Aside from exposure, the

* Read at a meeting of the Burlington Clinical Society, Feb. 28th, 1902.

most common is the ingestion of an irritant poison in medicinal or toxic doses. These cases are familiar with you all. If I may be permitted, I will mention a case which came under my notice recently. I have had two of this same class since December, 1901, wherein the patient had taken irritant drugs to such an extent, that it was a question as to the cause of death. The drug was such that it could not be identified by chemical tests while the autopsy showed evidence of an attempt at abortion, at any rate a reason for such an attempt. Grossly, the kidney was enlarged, markings were very faint, and capsule adherent. Microscopically the veins,capillaries andMalpighian tufts contained an increased quantity of blood, and the epithelial cells of the tubules, especially of the cortex, were much flattened. A catheterized specimen of the urine showed four and one-half grains of urea to the ounce, eleven per cent. of albumin, many hyaline casts and blood cells. My conclusions under the circumstances were based on the facts:—my inability to find poison and the existing conditions. This led me to believe that the person died of uremic convulsions caused by the effect of some irritant poison, which by a chemical test, I was unable to identify. The reasons given for the existence of a nephritic condition are those which suggest primarily the lung, or heart, or both: secondarily the quality of the blood which is required to maintain proper nutrition to the organ. Therefore, would it be out of place to say that if the engine, the heart, was being run with poor fuel, the blood, we could not expect the cellular elements of the kidney to maintain their normal condition or to perform their normal functions of purification and the expulsion of poisons and waste products? Consequently examine the blood and urine and be governed by facts.

The fact that acute degeneration of the kidney is the ordinary lesion of infectious diseases, is the most important. In case of death where autopsy may be had, we look for pathologic conditions and it is expected that such autopsy will reveal the cause of death. Many times it does. There are times when it does not. Every organ may be found apparently normal until the examination of the kidney suggests disease. Can you say that the existing condition of the kidney caused death? The majority of times, you can not, but you may state positively that the microscopic appearance is such as would consistently cause death. Just here, I want to say that in cases where I have had occasion to perform autopsy, and found the kidneys in a markedly diseased condition, upon inquiry, I have never been able to discover that a complete urinary analysis had been made. I have catheterized the subject and found as high as 20% of albumin, all kinds of casts and as low as ½ or 1 gr. of urea to the ounce. I must confess that even in those cases, I dare not say positively that death was due to nephritis. I can only say that from the condition of the kidney, and the result of the urinary analysis, I would expect uremic convulsions and possibly death. We are rarely able to obtain a human kidney in the state of acute nephritis for the condition is not a fatal one. It is found, however, that the kidney is enlarged, that the veins, capillaries and Malpighian tufts contain an increased quantity of blood and that the epithelial cells of the cortex are flattened. There may be an exudation of serum and an escape of colored cells from the vessels. But the characteristic symptom is diminution in quantity or suppression of the urine. This condition of acute hyperemia may be said to mark the initial stage of nearly all forms of acute nephritis. The urine contains more or less blood, according to the severity of the condition. In mild cases, only a few scattered cells: the color, also, depends upon this: albumin is always present (so stated by some), while others place more importance on the presence of casts which are mostly hyaline and of small size: free epithelium from the tubule will often be found: the quantity of urine is at first increased: the specific gravity reduced, and the proportion of the solids re-

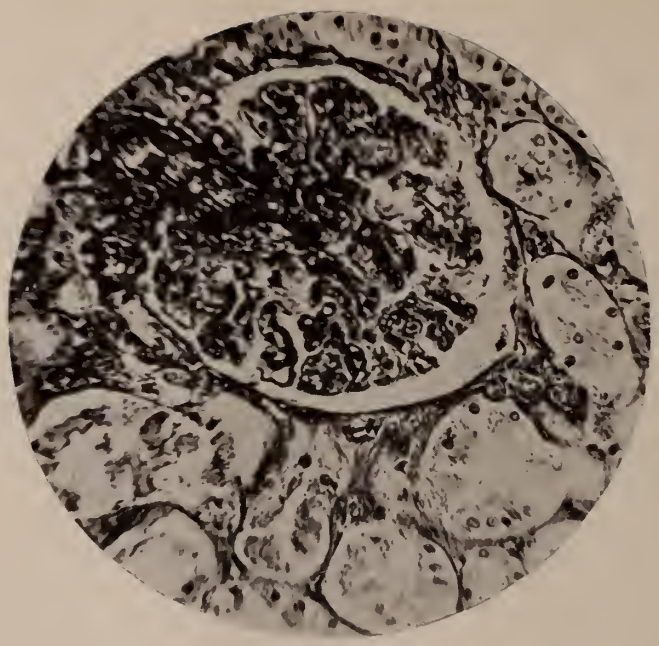

Fig. 1.—Chronic Interstitial and Diffuse Nephritis, $\frac{1}{6}$ objective. In this slide the tubules are shown transversely. (Slide and photo by Wiltse.)

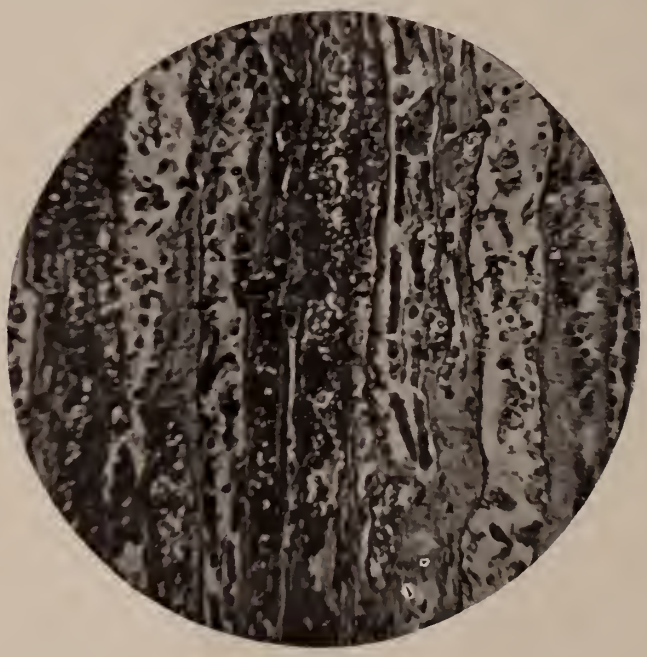

Fig. 2.—Chronic Interstitial and Diffuse Nephritis, $\frac{1}{6}$ objective. In this slide the tubules are shown longitudinally. (Slide and photo by Wiltse.)

CHRONIC INTERSTITIAL NEPHRITIS.

duced: acidity normal: if the condition continues on, most of these physical characteristics are apt to be reversed.

The venous stasis, or passive hyperemia is never a primary renal disease, but is secondary, due to the circulatory organs. The urine in these cases is always diminished in quantity: specific gravity increased, sometimes as high as 1025 to 1030: color dark: frankly acid: transparency cloudy: especially no reduction in the amount of urea: albumin in varying amounts: the sediment contains uric acid, amorphous urates, few hyaline casts, and a few colored cells. Venous stasis is distinguished from interstitial nephritis by the increased volume of urine in the latter, low specific gravity, small amount of deposit, absence of blood and constant deficiency of urea. The most prominent clinical features of interstitial nephritis are a full, hard pulse, always showing increased tension, cardiac enlargement, and absence of dropsy until the later stages.

It will be impossible to take up all the forms of nephritis, therefore we will consider the most common. I refer particularly to that form described under various titles as chronic interstitial nephritis: chronic productive nephritis without exudation: chronic Bright's disease: cirrohosis of the kidney: granular degeneration: chronic indurative nephritis, the arterio-sclerotic kidney: gouty kidney: small granular kidney. These occur frequently about middle adult life, is found in apparently strong, healthy and well nourished individuals, and is one of the most insidious of all physical derangements. In the great majority of cases, it is well advanced before it is detected: in many cases before the advice of a physician is sought: among the first symptoms noticed are tendency to micturate once or twice during the night: slight disturbance of digestion, slight dyspnœa on exercise. There may or may not be head-ache: if the person is one of nervous temperament there is apt to be more or less neuralgia in various parts of the body. The urine at this time may be normal in quantity, color, specific gravity and reaction. The amount of urea excreted may be normal or only slightly below the average amount and the other solids entirely normal. Generally there is no albumin although occasionally there is a mere trace (1-40 of 1% by weight or less). The only sediment observable to the unaided eye is the usual light, nearly transparent, cloud of mucus. Microscopically a greater or less number of hyaline casts will be seen. Generally a few uric acid crystals, and crystals of calcium oxalate, often a few scattered colored cells, a greater or less number of leucocytes and squamous and possibly some round epithelial: the hyaline casts may be very few in number not more than five or six being seen in the preparation: but these and the blood cells are of the greatest significance.

In considering the significance of the presence of renal casts, it is well to remember that these bodies when formed beyond the irregular tubule are never discharged with the urine; the calibre of the ascending limb of Henle's loop is too small to allow the passage of any body whose diameter is that of the preceding divisions of the uriniferous tubules except the descending limb of Henle's loop.

There are two plausible theories to account for the presence of the larger casts. The first is that they originate in the excretory ducts or collecting tubes, the diameter of which is greater than that of the tube beyond: the second and they come from tubules, the lining epithelium of which has been desquamated, thus having a tubule whose diameter has been increased by the amount of epithelium removed. The least significance of the presence of these casts is renal irritation, the greatest—advanced chronic interstitial nephritis. Notwithstanding the statement to the contrary of many medical men, whose opinion is generally of weight, the occurrence of these cylinders, even if very few in number, should put the physician on guard. The urine should be subjected to critical examination at regular inter-

vals until those bodies have disappeared from the renal secretions. There is no doubt that many cases of so-called Bright's disease exist for months without detection, simply because a careful microscopic examination of the urine has not been made. The chemical analysis of such a specimen may be entirely negative.

The suggestion of the method of formation of casts need not be gone over as it is well understood. In conclusion, I wish to cite a case of chronic interstital nephritis which was under observation for some considerable time: Patient, male, middle life, height 6 feet, weight about 200 pounds. In fairly good health up to within a few weeks before I saw him when there was neuralgia pains in head and extremities, lassitude, disturbances of digestion, restlessness at night, with some alcoholic specific history. Urine quantity in 24 hours, 40 oz., color reddish-yellow, clear, reaction acid: specific gravity 1020: total solids 880 grs.: urea 9¼ grs. to oz.: 370 grs. in 24 hours: chlorides normal: phosphates slightly diminished: no albumin or sugar: microscopically—numerous hyaline, slightly granular and epithelial cast: a few colored blood cells: a few leucocytes: a few squamous and round epithelium, and a few uric acid crystals. This person died from complications which suggested the original trouble to have possibly arisen in the circulatory system a manifestation of which was shown in the analysis of the urine.

Involuntary Micturition in Children. —A recent number of *Pediatrics* contains a very excellent paper under the above title, by Dr. G. Frank Lydston, of Chicago. With reference to the treatment, the author believes that the use of the urethral sound will accomplish much good in a great majority of cases. It corrects vesical hyperesthesia, relieves congestion of the mucous membrane of the deep urethra, and in purely neurotic cases it stimulates the relaxed sphincter to contract. Systematic sounding cures many very obstinate cases. To begin with, of course all sources of reflex irritation should be relieved. Next to the sound the best method of treatment in purely neurotic cases consists in the deep injection of strychnia into the lumbar muscles. —*Texas Med. Jour.*

CHRONIC GASTRITIS AND ITS TREATMENT.*

By G. G. Marshall, M. D., Wallingford, Vt.

Chronic gastritis is a disease characterized by continued disturbance of digestion, giving rise to numerous symptoms, which have led to the use of such terms as chronic dyspepsia, indigestion, "heart-burn," pyrosis, etc.

Pathology.—Of the pathology I need only to call attention to the fact that common to all inflammatory processes we find round cell infiltration, with subsequent increased fibrous tissue with more or less destruction of the secretory cells, according to the degree or stage of involvement. This process may continue until the gastric cells are completely atrophied. The muscular wall may also become thin and weakened—thus favoring dilatation. The pyloric end is most frequently involved.

Varieties.—D. D. Stewart of Philadelphia, finds four varieties; the acid, sub-acid, mucous and atrophic. Ewald, Einhorn and others insist that in every case of chronic gastritis there is diminished secretion of hydrochloric acid and therefore class all cases of increased acidity of hyperchloridia, among the neuroses.

The atrophic, except in rare cases, when it may be primarily caused by a neurotic origin, is only a later stage of the simple or sub-acid variety.

Etiology.—The causes of gastritis may be either constitutional or direct. Of the constitutional causes may be mentioned those diseases which interfere with the proper blood supply to the stomach, such as valvular heart lesions, cirrhosis of the liver or spleen and such diseases as diabetes, chlorosis, and Bright's Disease.

The direct causes would begin with gross errors in diet, imperfect mastication, which latter is often associated with carious teeth affording lodgment for putrefactive bacteria. Heredity is mentioned as one of the causes. Gastritis once established with its diminished

* Read before the Rutland County Medical and Surgical Society, Jan. 14th, 1902.

secretion of hydrochloric acid, fermentation is sure to follow and the poisons thus produced act as a continual irritant. Alcohol is a frequent etiological factor.

Symptoms.—The symptoms of chronic gastritis vary from those presenting a mild type of indigestion to those symptoms so severe as to give rise to grave apprehension of malignancy. Usually the patient first notices that he has difficulty in digesting certain articles of food, especially after the evening meal. These symptoms disappear at times only to recur at every offence in diet, until the patient finds himself what is termed a chronic dyspeptic. At this stage they have a coated tongue, a saline or salty taste in the mouth, a lost or perverted appetite. After each meal they suffer from a sense of fulness or weight in the stomach. At times, they have an abnormal appetite, but usually a few mouthfuls satifies this hunger. One or two hours after eating fermentation begins, because of insufficient hydrochloric acid and loss of the motor power, allowing the food to remain stagnant in the stomach. This gives rise to belching of gas, usually odorless and tasteless. "Heartburn" is a more or less constant symptom and is generally associated with nausea, though vomiting is not frequent, except in alcoholics. The pain is usually not of a severe character, but generally described as "distress." They are usually constipated, though diarrhœa may be present at times. Emaciation is not generally marked, but in some cases, especially those previously very fleshy, the loss of weight may be very rapid.

In the mucous variety patients will frequently spit up (regurgitate) a pint or more of mucous during the twenty-four hours. A patient suffering from chronic gastritis becomes nervous, low spirited, and frequently is troubled with morbid fears. While some of the more severe types of chronic gastritis are so emaciated that they are confined to the house or even the bed, most of these cases will be found attending to their usual duties.

Course and Prognosis.—When recognized early and proper hygienic rules and treatment are followed, recovery is usually prompt, provided the cause be not constitutional.

When the gastritis has been progressing for years, the patient gradually becomes emaciated and finally dies of inanition unless some other disease supervenes to hasten the end. Ewald says "that many cases of deaths reported as being due to old age really result from slow starvation caused by chronic gastritis."

But with the regulation of the diet (most all cases of chronic gastritis take too little nourishment) and proper treatment, patients with total atrophy of the gastric glands may be kept well nourished and enjoy a fair degree of health for years. Several such cases have been reported by Einhorn and others.

There is always a tendency towards an exacerbation of the trouble because most patients are unwilling to make the necessary sacrifice in denying themselves those things which experience has shown to be harmful .

Diagnosis.—The diagnosis of chronic gastritis when given all the typical symptoms might be easy; most cases however will not have all the given symptoms, and others assume so severe a type that cancer, gastric ulcer or the neuroses must first be excluded.

In carcinoma the pain is usually more severe and quite constant, though greater after eating. Vomiting instead of being rare, is nearly always present and frequently shows the presence of dark blood. Emaciation is rapid and all the constitutional symptoms grow progressively worse to a fatal end; the whole course not covering a longer period than twelve to eighteen months. A tumor when detectable is an important diagnostic aid, though at this time the patient will be far advanced with the disease.

Ulcer of the stomach usually occurs in younger persons, women are more frequent sufferers of gastric ulcer than men. The pain is more acute and much more severe after taking food, especially coarse food. Localized spots of tenderness over the stomach and vom-

iting of bright red blood, when present, are quite characteristic.

Examination of the stomach contents after Ewald's test breakfast shows increased percentage of hydrochloric acid in gastric ulcer and diminished or absence of the same in cancer.

The neuroses may simulate any type of stomach trouble. The symptoms referable to the stomach are not constant, but variable. The pain is greater when the stomach is empty, and may be retarded by firm pressure over the stomach, or by drinking a glass of milk if there be hyper-acidity. Or if there is pain after eating. it is no worse after taking a coarse diet, than after a bland diet.

Examination of the stomach contents either in the fasting condition or after a meal, must in most cases be the main guide in determining the kind of stomach trouble we have to deal with. This procedure is not difficult and should not be left entirely to the domain of the specialist.

In chronic gastritis there is always, according to Ewald and Einhorn, diminished hydrochloric acid secretion, and in the atrophic the acid as well as the ferments must be absent. Lactic and butyric acids may be present when fermentation is active. In cases of nervous origin, the stomach examination may show opposite conditions at different times in the same individual.

The stomach tube is most generally used for obtaining fluids to be tested, the tube being inserted in the usual way, the patient takes a deep inspiration and at the same time the abdominal muscles are contracted, when the stomach contents will be forced out through the tube. Einhorn has devised special buckets for the purpose but they have no advantage over the tube except in those cases where the use of the latter is not permissible. Having obtained the desired stomach contents, tests for hydrochloric acid, free and combined,lactic and butyric acids and the ferments are made by well known methods.

Treatment.—In the treatment of chronic gastritis, the patient as a whole, should not be lost sight of. All practical hygienic rules should be made use of, such as exercise in the open air, living in well lighted and ventilated apartments and freedom from care, so far as possible, is to be desired.

Generally speaking they should at first take frequent light diets and, as improvement follows, more substantial and heartier foods are allowed. A largely vegetable diet is usually better tolerated when there is a deficiency of the hydrochloric acid secreted. Einhorn recommends, instead of telling what the patient should eat, to mark the foods he should not, leaving the patient to choose his own diet from the eatable list.

Various writers have prepared tables of foods best suited to these cases, which will be of aid in selecting a suitable diet.

Of drugs, most writers agree that hydrochloric acid is of first importance in treating chronic gastritis as it not only supplies the deficient natural acid but also acts as an anti-fermentive, first, by hastening the process of digestion; second, by its direct anti-fermentative properties, and third, by stimulating the gastric glands to greater activity.

Ewald recommends giving it in large divided doses after meals. Most writers, however, think twenty to thirty drops sufficient. When given for its stimulating effect it should be given in small (5 to 10 gtt.) doses before meals. Ewald gives it in large (dr. i to dr. ii) doses through the stomach tube, to those accustomed to the tube. He testifies that he has never seen any bad effects from giving these large doses over a long period of time.

Hydrochloric acid should be given one-half hour after meals well diluted, when given in larger than 5 or 10 gtt. doses.

Pepsin is generally regarded as unnecessary, if not useless, by most observers, as this ferment is still secreted in liberal amount even when the acid is very much diminished. Since

pepsin is not secreted as such, but as a zymogen, and the latter is converted into pepsin only in the presence of hydrochloric acid, the importance of supplying this acid artificially when it is deficient is apparent.

The bitter tonics are generally useful either alone or better still combined with hydrochloric acid. Condurango has appeared to be of peculiar value in some cases of chronic gastritis that had been of so severe a type that malignancy had been feared. The bitters increase the appetite, improve the muscular tone of the stomach and increase the natural secretions of the peptic and hydrochloric glands when they are deficient, but do not when the secretion is normal. The bitters are best given 20 to 30 minutes before meals, except when combined with large doses of hydrochloric acid, then it is best given after meals.

The saline and alkaline saline waters or their salts are of service in treating chronic gastritis. The sodium chloride increases the hydrochloric acid and the sodium sulphate and phosphate act as a laxative and also dissolve the tenacious mucous covering over the mouths of the gastric glands.

Bismuth subgallate, resorcin, creosote and thymol may be given with benefit when antifermentives are needed, and the stomach washing is not permissible. When there is no contrary indication for the gastric lavage or better still the gastric douche, its use will give better results than any of the above mentioned remedies. The gastric douche which differs from the lavage in that the water is forced into the stomach under pressure through numerous needle-like holes at the stomach end of the tube. By this means the mucous with its swarming bacteria is dislodged, "the gastric glands are stimulated to a healthy reaction and the muscles are invigorated, giving increased peristalsis." Plain water may be used or when much mucous is present, sodium chloride and sodium bicarb. should be added. After the first washing some mild antiseptic solution may be used. A weak solution of silver nitrate (1 to 3,000) is recommended when there is excessive mucous secretion. Good results are obtained by washing the stomach with a weak solution of tincture columbo, gentian or other simple bitters.

Einhorn has devised a special spray apparatus for spraying the stomach. The advantages of the spray as mentioned by Einhorn are: that strong or pernicious drugs may be administered this way, that would not be safe through the stomach tube. His experience has shown this form of treatment to be useful in erosions of the stomach, chronic gastritis and in cases of hyperchloridia. Instead of using Einhorn's special spray apparatus the ordinary alboline atomizer may be used. These atomizers will carry a good spray through the stomach tube and by this simple means the stomach can be effectually treated. When silver nitrate is to be used it will be necessary to first dissolve it in water and then mix this solution with three or four parts of glycerin in which solution it can be carried in a spray through the stomach tube.

Electricity.—The use of electricity in the treatment of stomach disorders has been highly recommended by various eminent writers for several years, but the general practitioner has rarely availed himself of this important therapeutic agent, yet there is hardly a simpler procedure in the whole domain of medicine.

That we may have a more clear idea of its therapeutic value, let us quote from a few writers who have had a large experience with its use in treating the diseased stomach.

Thomas G. Ashton says: "In electricity we possess an important and oftimes efficient means of treating chronic gastritis," and he substantiates Goldsmith when he says, "that direct electrization of the stomach is not only an important means of combatting nervous disorders of the stomach but is also of good service in those gastric affections possessing an organic basis." To quote farther he says: "Thus we have relieved many of the symptoms of diseases which are dependent upon a dimin-

ution or absence of hydrochloric acid, and by stimulating the glands to renewed activity further degenerative processes are retarded or prevented."

To Einhorn is credited the bringing of direct electrization of the stomach within the range of practical therapeutics by means of his experiments and his invention of what he has termed "the deglutable stomach electrode." Einhorn says: "I have made an extensive study of the physiological effects of direct electrization of the stomach and from my experiments give the following conclusions:

"1st. Direct faradization of the stomach increases gastric secretion (a) during the application and also (b) for a short time afterwards.

2d. Direct galvanization of the stomach with the negative pole within the organ, in most instances diminishes gastric secretion.

3d. Direct faradization as well as galvanization of the stomach increases its absorbent faculty."

His conclusions as to its therapeutics are:

"1st. Direct gastric electrization is a potent agent in the field of (non-malignant) chronic diseases of the stomach.

2d. Direct gastro-faradization proves to be useful in many ways in most chronic diseases of the stomach.

The favorable results appear very closely and pretty quickly in those cases of stomach dilatation which are not caused by an obstruction of the pylorus. Here the gastric faradization is beneficial in cases of either sub-acidity or hyper-acidity. Cases of relaxation of the cardia (eructation) also of relaxation of the pylorus (presence of bile in the stomach) were very favorably influenced by faradization. Here the results were most markedly pronounced inasmuch as beside the subjective amelioration of the patient's symptoms, the objective examination showed absence of bile in the stomach.

3d. Gastro-galvanization is almost a sovereign means for treating severe and most obstinate gastralgias, no matter whether the effect be of a nervous origin or caused by a cicatricial ulcer of the stomach.

4th. Gastro galvanization exerts a favorable influence on several affections of the heart complicated with gastralgia."

Einhorn proceeds to say "that the mode of which electricity acts is not known but the very numerous successful results obtained by this treatment warrants its general use."

To quote from Ewald who says: "Patients suffering from nervous anorexia frequently eat their food with relish and digest it fairly well immediately after the application of electricity." Speaking of electricity in chronic gastritis Ewald says: "As a stimulant of the glandular secretion we may employ internal faridization of the stomach, although the tonic action on the muscles undoubtedly also plays an important part. This much is at all events certain, that I have had most perfect success with this method in a number of obstinate cases of chronic gastritis. It must be added, however, that the treatment was faithfully given several times weekly for a long time together with appropriate drugs and diet; but since these latter had been previously used for a long time without any pronounced good, we must accord to the electricity the greater part of the success obtained."

D. D. Stewart of Philadelphia, says: "Intra gastric electricity, but especially faradism, the writer regards (in ten years' experience with it) of value in cases of sub-acidity and loss of motor tone."

Of per-cutaneous electricity, Pepper says: "The difficulty of compelling a current, no matter what may be its strength, to penetrate through the various layers of tissues of different consistency and anatomical character, is well known."

Before swallowing the electrode the patient should drink a glass of water, as the stomach has to be protected from direct contact with the metal by a hard rubber capsule. The water acts as the medium for distribution of

the current. With one electrode within the stomach a large sponge electrode is applied over the region of the epigastrum. The latter electrode should also be moved along the course of the colon and then to the left of the spinal column on the back, opposite the solar-plexus. The whole sitting should continue for 8 or 12 minutes. With the galvanic, the negtive pole within the stomach, 15 to 20 milliamperes should be used. When the faradic current, sufficient strength is used to produce distinct muscular contraction of the abdominal wall. In beginning and stopping, the current should be much weaker. With the deglutable electrode the patient experiences very little dis comfort and it can be used in perfect safety when the stomach tube would be contra-indicated.

To conclude, the points to note are, that chronic gastritis is an exceedingly common disease. That it is often overlooked and allowed to pass as a simple functional dyspepsia, and that the simplicity by which electricity can be used warrants its general use, instead of its use being limited to the hands of specialists. And finally, the practitioner should never forget the importance of looking for constitutional or organic causes as being either direct or indirect etiological factors.

Normal Salt Solution in Pleurisy with Effusion.—Dr. John A. Robinson states that normal salt solution injected into the pleural cavity after removal of the fluid or when the fluid is loaded with fibrin enhances the tendency to absorption. The points he emphasizes are: 1. It increases osmosis of the fluid into the blood vessels. 2. It increases the activity of the absorbent lymphatics. 3. It acts as a solvent and an antiseptic. 4. The heat of the injection has a stimulating influence on the pleural vosomotor nerves, dilating the capillaries and hastening the blood current.—*Jour. Amer. Med. Asso.*

NOTES ON THE VALUE OF VERATRUM VIRIDE.

By A. T. Woodward, M. D., Brandon, Vt.

Of late my attention has been arrested by articles printed in medical journals emanating from the pens of able writers, on the value of so-called Norwood's Tincture of Veratrum Viride in the treatment of eclampsia. I should have been surprised at the large doses given, and repeated at short intervals, had I not been acquainted with the fact that the stores often sell an inferior article of the tincture, or a fluid extract which is wholly unreliable in the treatment of other ailments. It seems to me that an article possessing such great power, and remarkable range as a most reliable agent, should always possess uniform strength. The Norwood tincture made by the Shakers, comes quite near to it, but the dosage is left in an ambiguous state. I have called it the *so-called* Norwood tincture of veratrum viride. To explain why I have done so, I will state that in the year 1852 or 3, when living in Castleton, Vt., Dr. Franklin Branch of Abbeville, S. C., spent the summer there to recruit his health. We were soon acquainted and spent much time together, as he frequently accompanied me on my rural drives. As was to be expected, our conversation was mostly upon medical topics, and it was from him I obtained all my knowledge of the discovery of the merits of the tincture. It seems from his account that Dr. William Tully of New Haven, Conn., (once a professor of materia medica in Castleton medical college, and author of a work on materia medica, and a remarkable experimenter with drugs, upon all medical students who would willingly submit to being experimented upon), spent a winter in Abbeville, S. C., for his health, and it was during that visit that he called the attention of the physicians of that region to the preparation of the tincture, and its potency as a heart sedative. It seems right and just that he (Dr. Wm. Tully) should be recognized as the father of the proper way of making the

tincture, and its great value as a heart sedative. Dr. J. H. Norwood was a most enthusiastic believer in its virtue and was foremost in bringing it into notice. Nor did he then, and to my knowledge has he ever sought to harvest by the attachment of his name to the tincture. It was given to it as a natural result of his association with, and emphatic recommendation of, the value of the tincture and will always go under the name of Dr. Norwood's tincture of veratrum viride. I have no desire, or design, to detach from Dr. Norwood any of the glory attached to it. I write this simply to record a fact. I will now record the proper way to prepare the tincture that it may be of uniform strength and may be implicitly relied upon for controlling or showing up the heart's action when given in a phlogistic disease. Cut up *freshly dug roots,* wash and *fill* a bottle with them, then pour over them sufficient alcohol to submerge them, cork and set aside for five or six weeks, at the end of that time it will be ready for use. The dried root is almost inert and wholly unfit to be used in the preparation of the tincture. This I have tested over and over again. As the plant grows abundantly in this section, I have always made the tincture which I use, after the above formula. This is the most reliable way to prepare Dr. Norwood's tincture of veratrum viride. I would impress upon the minds of the medical profession the idea of having the druggist of their place make the tincture of veratrum viride after the above formula that they may be quite sure of having a genuine article. Or any physician can do the work for himself, as I always have. The plant resembles *Dracontium foetidum* (vulgarly called skunk cabbage). At a little distance they are easily mistaken one for the other. The most marked difference between them is that the leaves of veratrum viride spring in pairs from an annual stem, about three feet in height. The skunk cabbage leaves spring from the root, and come out from the earth. Both having about the same tint of green.

Dosage—In a given case of phlogistic tendency, or when well established, commence with not more than four drops of Norwood's tincture. At the end of an hour, if the heart's action is still the same, no reduction in frequency of action, give five drops, and at the end of another hour, if no change has been effected, give six drops, and so on until the pulse shows a change, even if only a few beats. It will commonly require no larger dosing after an impression has been made. If five or six less frequent beats (accurately noted) are made, then for the next two or three hours use the number of drops last given, increasing the dose if after two hours no further diminution in beats is noted. When once the desired number of heart beats has been attained, keep steadily on every hour with the last number of drops given. Used in this way the profession will find they have a most valuable remedy. Now occasionally you will get an overaction of the drug, and the heart beats will drop to a frightful infrequency. The patient breaking out into a cold sweat, almost pulseless, giddy, and nauseated or even vomiting may occur. This is not to be feared. You will see that it has been caused by only one additional drop of the tincture. A tablespoonful or two (almost always one) of whiskey, brandy, rum or gin, will restore harmonious action again in a very few minutes. So too will any form of opium. I have given both at times. I always give the nurse full knowledge of this action, and learn that she understands it before leaving a patient. Now it is often the case when this state has once been produced that the pulse will not again during the illness rise above the normal (or only a few beats above it), and no further use of the tincture will be required. You must know that you are dealing with a phlogistic case. A rapid pulse as found in all diseases accompanying prostration of the vital forces would be made worse by it. Many years ago I had a case of enteric fever in the person of a young robust fellow eighteen years old, and for the first three days two attendants

were required to keep him upon the bed. I had tried two or three remedies but they were powerless, then I commenced using tincture veratrum viride at about eleven A. M. At seven P. M. I took counsel of an older and abler man and after reaching our home, which was three miles from the patient's home, he said: "Doctor, I would not have used veratrum viride in that case." I asked, "why did you not say so before we left the house?" I do not remember his answer, but for several reasons I did not return to change the medicine until the next forenoon, when I found my patient tranquil, and sleeping quietly. He recovered. Several days later a sister, a year younger, came down with the same disease, and with the same symptoms. The advice given in the brother's case deterred me from using veratrum viride. She died. I do not mean to imply that the veratrum would have prevented the death had it been used. The physician must understand that he has a phlogistic case to deal with, then he can safely rely upon veratrum viride as a heart sedative. I have often said to the medical class when discussing the merits of veratrum viride that I never passed a plant of it growing in the field without feeling it my duty to take off my hat—in profound respect for its value.

A Remedy for Burns.—Dr. Wilson recommends a mixture of castor oil with the white of egg for burns. It allays the pain more quickly and causes the wound to heal more rapidly than any other application. The eggs are broken and emptied into a bowl, and the castor oil gradually and slowly poured in while the eggs are beaten. Enough oil is to be added to make a thick and creamy paste, which is applied to the burn with a feather. The applications are repeated often enough to prevent their becoming dry or sticky. It is best to abstain from any dressings, leaving the surface uncovered.

THE ETIOLOGIC RELATION OF NEPHRITIS TO CARDIAC DISEASE.*

By H. Edwin Lewis, M. D., Burlington, Vt.

At first thought one would estimate the etiologic relation of nephritis to cardiac disease as of slight importance. But the frequency with which marked changes of the heart structure accompany certain diseases of the kidneys would seem to show that their clinical association is more than coincidental. Ever since Bright's disease was first described in 1827, more or less significance has been attached to certain pathologic conditions of the circulatory apparatus which develop synchronously or as a result of renal derangement. Many observers have attempted to account for the clinical fact that definite cardiac involvement is constantly being met in nephritis, but their solutions of the problem have failed to harmonize with all the pathologic phenomena and as a result the whole question is still a mooted one.

Nevertheless, every physician who is in the habit of giving his patients thorough examinations, frequently observes the clinical association of cardiac and renal disease and is obliged to regulate his treatment accordingly. Because of the added problems presented in treating nephritis when cardiac complications occur and the additional factor which arises in relation to prognosis,the subject is an inportant one and well worthy of consideration. Therefore while I realize my inability to handle the subject as thoroughly or as competently as its importance would justify, I will attempt to briefly present the topic for further discussion.

The cardiopathies which occur with, or in the course of nephritis may assume the form of simple irritation, marked hypertrophy or actual valvular disease. Simple irritation of the heart resulting from renal disease is due to the retention of toxic substances or reflex action, and is transitory in its character. Valvular

* Read at the regular Monthly Meeting of the Burlington Clinical Society, Feb. 28, 1902.

disease of the heart is of so rare occurrence in the course of renal disease that its consideration as a complication of nephritis is of small practical importance and it is sufficient to say that it is either due to infection carried from the kidney or to an extreme dilatation of the heart which enlarges the valvular apertures and renders the valves themselves physically incompetent for their function. The important and common cardiac complication of kidney disease is simple hypertrophy, either of the left ventricle or of the whole organ. This has been accounted for in various ways but it can be logically attributed to that immediate and persistent increase of arterial tension so characteristic of renal insufficiency from all causes. Increased tension means additional work for the heart and the cardiac muscle responds by increasing in size and capacity. This attempt on the part of the circulatory apparatus to establish a vascular balance in the presence of a kidney lesion is shown by the course of many cases of dropsy. It is no uncommon thing for a dropsy which occurred at the outset of a nephritis to gradually decrease and at least temporarily disappear with the development of cardiac hypertrophy. Again in some cases the dropsy dependent on renal disease may be recurrent. This can be logically accounted for by the varying ability of a heart muscle to maintain a vascular balance and is very similar to the conditions met in valvular disease when compensatory hypertrophy is being established. When the balance is perfect and the hypertrophic condition of the heart is equal to the work required of it in overcoming resistant forces, dropsy is absent. But when for any reason the cardiac hypertrophy is insufficient or falters in the struggle against the increased tension resulting from nephritis, dropsy follows.

I have in mind two cases that well illustrate the above statement.

The first was a man of 62—a machinist. He gave a history of having had dropsy on one occasion nearly a year previous, which his attending physician had attributed to heart disease and treated successfully by the administration of a heart tablet containing nitroglycerin, digitalis, strophanthus and belladonna. His dropsy gradually disappeared and he was well so far as he knew for the succeeding ten months, when one morning following a particularly arduous day's work, he awoke to find himself badly bloated. On this occasion I saw him for the first time. His limbs and his face were much swollen and his eyelids and the looser portions of skin around his neck were very oedematous.

There was some dyspnea, and a slight cough which he had not had before. Examination of his heart showed a displaced apex beat and every evidence of cardiac hypertrophy. His pulse was 96 and hard and wiry. I obtained a sample of urine and on examination found specific gravity to be 1016, and obtained a slight trace of albumin. Microscopically the picture was typical of chronic interstitial nephritis.

This gentleman was given 5 grains of calomel followed in an hour or so by salines. A diuretic mixture of equal parts of infusion digitalis and Liquid Potassii Acetatis was also administered, and small often repeated doses of nitroglycerin. Absolute rest or as near it as possible was enjoined and in three days his oedema had almost entirely disappeared. For several days longer he was kept in bed and then was gradually allowed to resume his work. Since this attack, which occurred over one year ago, he has been on dietetic and general treatment, but has had two slight attacks of dropsy following indiscretions of habits or work. Neither of these attacks lasted over a few days.

This case from its added history of moderate alcoholism, the clinical symptoms, uranalysis and course, leaves little doubt but that it is one of contracted kidney with secondary cardiac hypertrophy. Since oedema is not usual in chronic interstitial nephritis, I feel justified in believing that the transitory appearance of dropsy in this case can only be attributed to temporary failure or embarrassment of the compensatory action of the enlarged heart.

The second case was a woman, aged 42, whom I first saw in December, 1900. She gave a history of having been treated during the previous three months for pulmonary tuberculosis and at the time of my first visit she was taking a cough mixture containing creosote. She was resigned to the fact that she

had consumption and had no suspicion that her malady might be anything else. Her cough was quite severe and there was considerable expectoration. Dyspnea was considerable and respiration was 28 to 30 per minute. Temperature was 99.4. The pulse was rapid, ranging from 120 to 140. It was peculiarly tense and incompressible. Examination of the heart showed some hypertrophy with dislocation of the apex beat. Auscultation gave a systolic murmur. Careful examination of the lungs demonstrated nothing abnormal with the exception of moist bronchial rales. Her emaciation was marked and at my first examination there was no odema of the eyelids. She claimed that her lower limbs had occasionally swollen for a long time, but the swelling was neither continuous nor excessive until about two weeks previous.

Interrogation relative to the urinary function elicited the information that she was passing very little water, less than a pint daily. This condition had existed for several months and at times the urine was very bloody. I had her send me all that she passed during the next 24 hours and examined it the next day. The amount was 14 ounces. Specific gravity was 1006 and it contained a large amount of albumin,approximately,about 20% Microscopically there were numerous blood cells, both white and red, a large variety of casts, and a great quantity of urinary debris. A specimen of her sputum, which she sent me at the same time, showed no tubercle bacilli.

Although in doubt as to the complete diagnosis of her case, I considered that the renal condition was the most serious phase of her trouble and consequently directed medication to the kidneys. She was put to bed and strict rest enforced. Hot water bottles were placed around her and every effort made to induce free perspiration. Fair success in this respect followed the measures employed. A diuretic mixture of infusion digitalis and Liq. Potassii Acetatis was also administered and this increased the amount of urine quite perceptibly.

Small doses of nitroglycerin were given at frequent intervals, and her cough was alleviated by small doses of heroin. All other food than milk was strictly interdicted.

Under this line of treatment she made considerable improvement in a few days and the heart frequency had dropped to 80 per minute. In two weeks the oedema of her limbs had almost entirely disappeared and she felt so well that contrary to my directions she got up and went around the house. That night I was hurridly called to her. I found her priest administering the last rites and there seemed little else that could be done for her. Her dyspnea was severe,—she was literally gasping for breath, and her pulse was so rapid I could not count it. The oedema of her limbs, which had come on since morning, was greater than it had ever been before. She was perfectly conscious and there were no symptoms of uremia.

With small hopes, I administered a hypodermic of morphine and nitroglycerin and took steps to stimulate perspiration. She was given a 5 grain calomel powder and after leaving directions to have her given a teaspoonful of Epsom salts in a half glass of hot water every hour until several good movements were produced, I left for home, hardly expecting that she would rally. She did, however, and next day was much more comfortable. General symptomatic treatment, with rest and a strict milk diet improved her condition somewhat during the next two weeks, but odema persisted and the pulse kept rapid, ranging around 120. Her cough bothered her considerably and was only controlled by heroin. A month later there was slight additional improvement, but the slightest exertion in bed brought on dyspnea and cardiac distress.

About this time I was impressed with her anemic condition and for my own interest made a blood count. The red cells numbered 2,900,000 and believing that this condition called for treatment, as a forlorn hope I put her on to a combination of strychnine and sodium cacodylate—(the di methyl arsenate of soda), 1½ grs. and 24 grs. to the ounce of cinnamon water respectively. Of this she began with 5 drops 3 times a day and increased a drop each day up to 20.

Her improvement from now on was quite marked. The heart dropped down to the vicinity of 80 beats per minute—her dyspnea ceased and the oedema entirely disappeared. In three weeks she was able to get up and two weeks later was around assisting at the housework with no ill effects. The urinary picture underwent great change and the albumin decreased until analysis showed only a trace. The casts, although they did not disappear, were greatly diminished, and there have been no blood cells since. The quantity of the urine is considerably increased. Her heart is hypertrophied, but while no murmur or adventitious sound can be heard, unusual effort increases its frequency out of all proportion to the energy expended.

In retrospect I believe that this case was one of chronic parenchymatous nephritis which had produced a degree of cardiac hypertrophy without, however, reaching the point of adequate compensation. Under the influence of rest

and tonic treatment it would seem that the renal condition underwent transformation to the stage of secondary contraction. Through the same agencies,—rest and tonic treatment, —the hypertrophy of the heart became ample to meet the demands placed on it, and thus overcame the oedema.

A great many theories have been promulgated to account for the increased arterial tension of nephritis. One of the most widely accepted is that which attributes the increased tension to the mechanical obstruction offered by pathologic changes in the parenchyma of the kidney. These changes offer resistance to the circulation and the damming of the blood in the renal artery produces a condition of hydraemia which in turn raises the blood pressure and an increased arterial tension is the result. The relation of increased tension in producing cardiac hypertrophy has been previously spoken of and requires no further reference. The above theory may rationally account for increased arterial tension and resulting hypertrophy of the heart in some cases, but certainly not in all. We know that in chronic interstitial nephritis, the form most frequently attended with cardiac hypertrophy, many times there is no obstruction to the excretion of water. Indeed, many times an increased amount of urine is voided. If the obstrucive theory was entirely correct, arterial tension would be lowered instead of raised, and contrary to claimed facts cardiac hypertrophy would not occur in this form of nephritis. But it does and sometimes the most evident cardiac enlargement accompanies interstitial nephritis attended with marked increase of water excretion.

With increase of knowledge relative to physiologic chemistry attention has been drawn to the possibility that certain waste products may be retained by a diseased kidney, and give rise to increased arterial tension through direct irritation of the heart muscle, or contraction of the arterioles throughout the body, or both. This theory is substantiated by the knowledge that the retention of urea however slight is always followed by vascular derangement, and still further by the experimental fact that urea introduced into the blood rapidly raises arterial tension.

Still later the investigations of *Bouchard, Croftan* and others which go to show the toxicity of substances normally eliminated with the urine,would seem to give further corroboration to the belief that excretory products of the kidney may be factors in producing cardiac hypertrophy either by increasing arterial tension or by direct action on the heart itself.

The frequency with which chronic nephritis and cardiac hypertrophy accompany arterio-sclerotic changes throughout the body, suggests the further theory that these conditions may be the result of faulty metabolism. Indiscretions of diet, habits or hygiene certainly induce arterio-sclerosis and it is not contrary to any known fact to suppose that many if not all cases of nephritis accompanied by cardiac hypertrophy and vascular derangement have their origin in variations of metabolistic equilibrium, or in those vital forces of which so little is known yet which play so important a part in the maintenance of functional cell life throughout the human organism. The subject is a prolific one for study and many hours of patient clinical and laboratory research will be necessary before the etiology of these diseases and their exact relation to each other can be determined.

In conclusion, however, I would emphasize the importance of interrogating the heart in all forms of nephritis, as the restoration of a patient to health and the prolongation of a valuable life, may depend to a very large extent on the assistance we are able to give in the production of compensatory conditions of the heart.

Anson A. Gibbs, M. D., University of Vermont, Burlington, a retired physician of Hemlock, N. Y., died from paralysis at his home, March 16, aged 71.

Dr. O. W. Peck,
1854-1902.

In Memoriam.

Dr. O. W. Peck, Surgeon-General of the State of Vermont, died at his home in Winooski, Vt., February 16th, 1902, after a prolonged sickness of several months.

Oscar Waite Peck was born in Montgomery, Vt., November 20, 1854, the son of William and Alice C. (Graham) Peck. He received his education in the public schools of his native town, in New Hampton Institute at Fairfax and in Barre Academy. Having chosen medicine as his profession, he entered the Medical Department of the University of Vermont, from which he received his degree of M. D. July 1, 1880. He at once located in Winooski, where he won a lucrative practice as a physician as well as general respect and esteem as a citizen. He was married June 2, 1886, to Carrie M. Blossom, who with a daughter, Mary Blossom Peck, survives him. He also leaves a brother, Dr. A. F. Peck of Worcester, Mass.

Dr. Peck took an active interest in public affairs and was always particularly zealous in promoting the educational interests of the community. He was superintendent of schools and school trustee, having served in each capacity three years, and he was president of the board of village trustees for a similar period.

He was assistant surgeon in the Vermont National Guard from 1880 to 1883 and from 1883 to 1884, was surgeon in that organization. He was State senator from Chittenden county in 1896-1898, and made an excellent record as a legislator, serving as chairman of the Senate committee on railroads and on the joint committee on the House of Correction. He was attending surgeon to the Fanny Allen hospital and consulting physician to the Mary Fletcher hospital. In June, 1898, he was appointed surgeon-general of the State of Vermont by Gov. Grout and in October of the same year he was re-appointed by Gov. Smith.

Dr. Peck was a member of the Vermont State Medical Society, of the Burlington Clinical Society and of other medical organizations and was one of the trustees of the Home Savings Bank of Burlington. He was a member of the Masonic fraternity and at the time of his death was master of Webster lodge, Free and Accepted Masons, also a member of Iroquois Camp No. 8940, Modern Woodmen of America. Dr. Peck was a member of the Episcopal church and a regular attendant at Trinity mission.

Dr. Peck was a man whom everyone liked. Genial, whole-souled and happy, he was a good friend to those who had any claim on his friendship. In his medical work, he was conservative and solid, yet possessed of a progressive spirit which led him to seek and use every modern method that appealed to his judgment. To the sick, he was ever gentle and kind, hopeful in his manner, but free from over sanguine or unwarranted promises. As a surgeon he was possessed of more than ordinary ability and as a diagnostican he was seldom in error.

To the community in which he lived his loss will be a severe one. His cheery greeting from day to day will be missed by many a man, woman and child to whom he was friend as well as physician, and many a day will pass before he will be forgotten.

His life is finished, but men like Dr. Peck never die. In the memory of those who knew him, he will always live, as a capable physician, a thorough gentleman and above all, a good friend. May more men be like him, and may more leave as clean a record and as cherished a memory. L.

NEWS, NOTES AND ANNOUNCEMENTS

Burlington Clinical Society.—The regular monthly meeting of the Society was held February 28th, 1902. In the absence of the President and Vice-President, Dr. H. A. Crandall was elected chairman for the evening. The program was as follows:

NEPHRITIS.

The Etiology and Pathology of Nephritis, Dr. M. J. Wiltze.
The Etiologic Relation of Nephritis to Heart Disease, Dr. H. E. Lewis.
The Treatment of Nephritis, Dr. S. E. Maynard.

The papers were thoroughly discussed, and a pleasant and profitable meeting enjoyed by all present.

U. V. M. Medical Class Officers.—The class of 1902, Medical Department, U. V. M., has elected officers as follows: D. H. Gatchell, president; E. A. Heath, vice-president; James M. Crumb, valedictorian; F. C. Lewis, historian; E. Sparks, marshal; R. C. Jones, secretary; R. J. Harvey, treasurer; B. L. Richardson, chairman; Thomas Walsh, second; R. M. Wells, third; O. V. Green, fourth, executive committee.

Medical Staff of the Central Vermont Railroad.—The Central Vermont Railway company has issued the following circular establishing a medical department for the relief of employes injured on duty and designating its staff of surgeons:

Northern Division.—Dr. Alan Davidson, division surgeon, St. Albans (available on any part of the division when called upon, and with immediate supervision at St. Albans); Dr. G. F. Slack, local surgeon, Farnham, P. Q.; Dr. A. T. Arkley, local surgeon, Essex Junction; Dr. S. E. Maynard, local surgeon, Burlington; Dr. Don D. Grout, local surgeon, Waterbury; Dr. C. E. Chandler, local surgeon, Montpelier; Dr. T. F. Gartland, local surgeon, White River Junction.

Southern Division.—Dr. J. G. Stanton, division surgeon, New London, Conn. (available on any part of the division when called upon, and with immediate supervision at New London); Dr. C. S. Pratt, local surgeon, Brattleboro; Dr. J. P. Schneider, local surgeon, Palmer; Dr. T. Morton Hills, local surgeon, Willimantic.

Copies of the rules and regulations have been posted on the various bulletin boards. Employes will govern themselves accordingly.

J. Alex Hutchinson, M. D.,
Chief Surgeon.

Approved:
E. H. Fitzhugh,
Vice-Pres't and Gen'l Mgr.

Dr. Hawley Re-elected.—At the last city election held in Burlington March 4th, 1902, Dr. D. C. Hawley, one of the city's leading physicians, was elected Mayor to succeed himself. Dr. Hawley is a graduate of the University of Vermont Medical Department, 1884, and is widely known throughout Vermont for his ability as a physician and surgeon. He has given Burlington a clean, progressive administration as its leading executive and his reelection is a well deserved testimonial to his character and worth.

Vermont Delegates to the American Congress of Tuberculosis.—Governor W. W. Stickney has appointed the following physicians as delegates to the annual meeting of the American Congress of Tuberculosis to be held in New York City, May 14-16, 1902:

Dr. Charles S. Caverly of Rutland.
Dr. Truman R. Stiles of St. Johnsbury.
Dr. H. Edwin Lewis of Burlington.
Dr. Don D. Grout of Waterbury.
Dr. W. N. Platt of Shoreham.
Dr. Wm. N. Bryant of Ludlow.
Dr. C. W. Peck of Brandon.
Dr. J. W. Copeland of Lyndonville.
Dr. L. W. Hubbard of Lyndon.
Dr. E. M. Brown of Sheldon.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

H. EDWIN LEWIS, M. D., *Editor.*

FRANK C. LEWIS, *Business Manager.*

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F. S. Hutchinson, M. D. *Enosburg Falls, Vt*

Burlington, Vt., February 25, 1902.

EDITORIALS.

MEDICAL ETHICS.—There was a time when medical ethics played a prominent part in the professional life of every physician. Certain hard and fast rules of conduct toward patients and brother practitioners were incumbent on every recognized physician and infringement was equivalent to professional damnation. There can be little doubt that many of the old ideas of medical ethics, so-called, were devoid of the liberal spirit of true science, or the broad expression of true fraternalism that ought to have pervaded the development of medicine. But the followers of such ideas were sincere and their adherence to their interpretation of medical ethics, was based on principle. For this they are deserving of all respect. But not so with a certain class who came after them. To this class, and it is cause for regret that so many physicians have belonged to it, personal gain has been paramount. Hypocritical in their lives, however, they have not dared to abrogate the time honored rules of the noble profession of medicine and so while shaping their actions in conformation to the letter of medical ethics, they have lived very far from the spirit. What has been the result? Just this, that the intelligent laity have seen through such pharasaical adherence to a sham of true ethics, and the relation of medical men to each other has been a standing joke for a long time. The latter day jealousies and animosities which have constantly been cropping out among those who practice medicine, have certainly failed to elevate the profession, and many a physician has been hampered and handicapped in his professional life by the bitterness of useless disputes with his colleagues.

Certainly this thing ought not to be. Life is too short, and for the busy doctor, too arduous and wearing, at the best, to admit of petty strifes and quarrels. If ethics, as so frequently exemplified now-a-days, means treating your brother practitioner one way to his face, and some other way behind his back, or claiming one thing and living another—throw it away, —have none of it. It is a delusion and a curse to professional usefulness. Better no ethics at all, if the modern form is simply a cloak for jealousy, deception and deceit.

But if medical ethics means shaping one's professional life as closely as possible after that matchless code laid down by a humble Galilean over eighteen hundred years ago,—it is the noblest and most important thing in a doctor's life. The physician who earnestly tries to treat his colleagues and patients as he would like to be treated were he in their place, can never go far astray from the paths of right, and no matter what happens or how many attacks are made on him, he will be happier, more useful, and a thousand times more successful as a physician and as a man, than those who—do otherwise.

The medical profession need no other code of ethics.

A DISGRACEFUL PHASE OF THE SMALL POX QUESTION.—The small pox epidemic which Burlington has been subjected to during the winter months, while never serious, has nevertheless had several unpleasant phases connected with it. In the first place, the squabbles over diagnosis were not edifying, and the calumnies thrown at the physician who discovered

the first case were as unkind as they were uncalled for. Then as the danger grew more apparent and the need of general vaccination arose, the dictum of the city's alderman fixing a price of twenty-five cents for vaccination came like an insult to the self-respecting physicians of the city, who, it is needless to say, did not abide by such dictation. But by far the most disgraceful as well as the most dangerous phase connected with the whole matter, has been the studious way in which the number of cases have been kept secret and every effort made to minimize the danger therefrom. The freedom of the city press has been interfered with and although we are ashamed to say it, the advertisers of at least one of our leading daily contemporaries *have forbidden the announcement of any information concerning the small pox cases in Burlington, under penalty of boycott!* Danger to business by frightening away the city's visitors was their plea, and placing business interests first, they have effectually muzzled the press. Not a word relative to the small pox matter that would show that from ten to thirty-five cases have existed right along up to the past few weeks, has appeared in the daily papers, and as a consequence a great many people have concluded that the scare was a hoax or at most of little moment.

Such a policy in stamping out small pox is almost criminal, for one of the most potent factors in combatting an epidemic of this disease, is publicity. Forewarned is forearmed and knowledge of the danger of small pox leads a community to take steps to avoid the same by thorough vaccination. It is estimated, however, that only about 8,000 were vaccinated out of nearly 20,000 people resident in Burlington. The fact that over half of the people of Burlington are not now protected against this filthy disease, can be largely laid at the door of those who have minimized or falsified the danger that has threatened.

We do not know who "the prominent business men" are who have been instrumental in keeping the small pox epidemic so secret, but whoever they are, they are unworthy of respect or anything else. The man who could lend his influence in covering up tangible danger or preventing adequate information of a loathsome, filthy disease, for personal gain, is a miserable example of how far business greed can lead people from decency and the Golden Rule.

THE STRENUOUS LIFE AND HEART DISEASE. —There is no country on earth where so many men die suddenly as in the United States of America. Every day some prominent man is stricken down in the midst of his work, and the cause is usually given as heart failure or apoplexy. The pathology of the condition does not mean anything to the people but they know that something has snapped and that another life has been sacrificed to the rush and strain of American civilization.

If there is a "pace that kills," the American people are living it, and the mighty struggle for power, profit or position which the average American is engaged in, readily accounts for the number who drop dead on the hill of ambition. Sooner or later people will awake to the fact that they cannot live for years with nerves keyed to the highest point, hearts beating away like steam engines, paying no attention to the needs of their bodies, without a break down coming sooner or later. Hearts, nerves, stomachs, every organ, in fact, gives way when the limit of endurance is reached, and though the strenuous life may be fascinating, it is dangerous when it makes us forget that we are abusing our bodies.

A busy life, even though a short one, may be preferable to many, but the man who neglects to guard his health in the absorption and rush of his business, and falls when he ought to be in his prime, is a failure in every sense of the word. No matter what he accomplished there is no extenuation, for his death removes him from possibilities that he might have attained. He has cheated himself and the world.

SPECIAL THERAPEUTIC ARTICLES

TREATMENT OF NASAL CATARRH BY THE GENERAL PRACTITIONER.

By Eugene C. Underwood, M. D.

Surgeon B. & O. S. W. R. R.; Surgeon K. & I. B. Co., etc., Louisville, Ky.

I have long entertained the view that the general practitioner neglects to treat his patients for catarrh and sends them to a specialist when he could successfully manage these himself. In fact, the treatment of catarrh is very simple and the results which follow correct and systematic treatment are very satisfactory. In practice, two forms of chronic nasal catarrh are met. These are hypertrophic rhinitis and atrophic rhinitis.

The hypertrophic form is more generally seen, and is characterized by a thick mucous discharge from the nose, great liability to colds, obstruction of one or both nostrils, which forces the patient to breathe through his mouth, nasal intonation of the voice. There is more or less headache and the sense of smell is lost or impaired. There is dryness of the throat, deafness and other symptoms showing the extension of the disease to neighboring organs. Exostosis of the osseous structures often is seen.

Atrophic rhinitis (ozena) is characterized by a sense of dryness in the nose and throat, a thick, purulent discharge and the expulsion of discolored crusts and an offensive putrid odor. The sense of smell is impaired and the patient is weak and anemic.

The mucous membrane is dry and glazed, but in advanced cases ulceration and necrosis are present.

The treatment consists of applications directly to the diseased area and the administration of such internal remedies as will correct any coexisting disease or morbid state. In some cases where there is occlusion by exostosis the resources of surgery must be invoked.

(Abstract from St. Louis Medical and Surgical Journal July 1901.)

Let me examine more in detail the treatment of the types of nasal catarrh.

In simple chronic hypertrophic rhinitis the results of treatment will be most flattering. In a case attended with no constitutional disease nothing is necessary beyond having the patient spray the nasal mucous surface with a solution composed of equal parts of water and Hydrozone every three hours.

If the case has persisted for some time and the patient has an amount of mucous discharge, I have him take twenty drops of balsam of copaiba four times daily. The Hydrozone is not only a disinfectant and germicide, but its curative action on the inflamed mucous membranes is speedy and is not equaled by any drug I have ever used. When the patient is anemic I have him take iron and any other drug is used when it is called for by any associated disease or morbid condition, but the Hydrozone spray is used in all cases.

In the atrophic variety we shall have to use the same local application. The Hydrozone at once overcomes the offensive odor and takes off the purulent crusts.

These cases must be treated with cod liver oil, iron and such other remedies as will bring up the general health.

Here are a few clinical histories:

Mr. R. H. M., age 60, had been a sufferer for two years. There was no exostosis, but when he had a cold he could breathe only through his mouth. He was in good general health, so I had him buy an atomizer and use a spray composed of equal parts of distilled water and Hydrozone. He sprayed the mucous surface of the nose every three hours. On this he made rapid improvement and in three weeks had no further symptoms.

S. M. T., age 18, had chronic hypertrophic nasal catarrh in which the mucous discharge was very abundant, and this was associated with dryness of the throat and constant desire to hawk and spit. She used the Hydrozone and water spray, and took fifteen drops of balsam copaiba three times daily. I had the

pleasure of seeing this young worman go along to complete recovery in a period of six weeks.

Mrs. R. J. C., aged 49. This lady had atrophic rhinitis and as soon as she came near you the putrid odor asserted itself. Her general health was lowered. I had her use the Hydrozone and water spray and take cod liver oil internally. She spent last winter in Cuba, and has just gotten home greatly improved in general health and her catarrhal disease is better.

She says the spray effectual destroys the disgusting odor and that scarcely any discharge now appears.

I expect to see this patient entirely well in several months.

THE TREATMENT OF SYPHILIS, WITH SPECIAL REFERENCE TO THE BEST METHODS OF ADMINISTERING MERCURY.*

By Winfield Ayers, M. D.

Genito-Urinary Surgeon Bellevue Hospital, O. D. P., New York; Instructor in Genito-Urinary Diseases in New York University and Bellevue Hospital Medical College: Instructor in Genito-Urinary Diseases in the New York Post-Graduate Hospital, etc.

The author calls to mind the facts that mercury has been used in the treatment of syphilis for ever 400 years, and there are few physicians, to-day, who do not use it in some form. Although the method of treatment with mercury is still discussed, he is firmly of the opinion that there is no hope of eradicating the disease unless the full dose is given constantly for something like three years. The treatment should begin just as soon as the diagnosis can be made. There is no ground for supposing that enucleation of the chancre has the effect of aborting the disease. If a positive diagnosis cannot be made from the appearance of the initial lesion, general tonic treatment should be instituted.

In some cases the protiodide controls the symptoms, but in the majority it is of very little use. Experiments with Mercurol were conducted at Bellevue Hospital, for eight and a half months, with 180 cases; the histories of 95 of these are recorded. The remainder could not be kept under observation and are therefore passed over. The dosage of the Mercurol, regulated either by reaching the point of tolerance or control of the disease, varied from one-half to six grains. In 64 of the 95 cases the disease was controlled as follows: in two weeks, 8; three weeks, 12; four weeks, 14; five weeks, 6; six weeks, 5; seven weeks, 2; two months, 8; ten weeks, 2; three months, 5; and four months, 1. The remainder are marked thus: decidedly improved, 17; improved, 8; no improvement in two weeks, 3; no improvement in four weeks, 1; and no improvement in three months, 2. The latter were all dispensary patients and it is uncertain whether they took their medicine regularly.

The writer states that his plan was to increase the dose steadily from one grain until the symptoms were controlled, or until there was a slight tendency on the part of the teeth and gums to become tender. If the symptoms were not controlled before the physiological effect of the Mercurol made itself felt, small doses of potassium iodide were added, and in every case where the Mercurol was taken according to directions, with the exceptions noted above, the symptoms were controlled.

In 67 out of the 95 cases tabulated, no other medicine than Mercurol was given. In 15 out of the remaining 28, the addition of iodide of potassium was found to be sufficient to control the disease, while in 6 others the addition of an iron tonic sufficed for this purpose.

The cases are not reported at length, but a few of the more remarkable results and some cases in which other medicines failed to control the disease are briefly mentioned.

Case 1 had been taking bichloride for one month with very little improvement. Under Mercurol, three grains maximum dosage, the symptoms were under control in five weeks.

Case 2 had been under biniodide of mercury (one-sixteenth of a grain) and potassium io-

*Abstract of an original paper by the author in The Lancet (London, Eng.), October 19, 901.

dide (five grains), which caused iodism. His symptoms were controlled in one month under half a grain of Mercurol.

In case 3 unguentum hydrargyri had failed to control the disease. The patient was put on Mercurol and the dosage pushed up to six grains three times a day. The disease was thoroughly under control in seven weeks.

Case 4 had been on three-eighths of a grain of biniodide of mercury and twenty grains of potassium iodide for two months. The medicine caused nausea and vomiting. Having been put on Mercurol and the dosage gradually increased to five grains three times a day, the symptoms were controlled in three weeks.

Case 5 had been taking hydrargyrum bichloride (one-twelfth of a grain)three times a day, under which an eruption on his face had faded, but the eruption on his body still persisted. His symptoms disappeared in two weeks under a maximum dose of three grains of Mercurol three times a day.

Case 6 had been on bichloride of mercury (three-sixteenths of a grain) for three months, in spite of which he had palmar syphilide of an eczematous variety. All appearances of the disease disappeared after he had been one month on Mercurol, his maximum dose being three grains three times a day.

Case 7 had been taking one-quarter of a grain of Mercurol and fifteen grains of potassium iodide, with the result that the eruption had decidedly improved, though not to the extent that it should have done. There were thickened red patches on the face, covered with scaly eruptions. The symptoms almost entirely disappeared within three weeks under a maximum dosage of five grains of Mercurol three times a day and fifteen grains of potassium iodide.

Case 8 had been treated with inunctions of mercury, under which the eruptions disappeared, but the pains in the bones still persisted. He was relieved in three weeks under a maximum dosage of four grains of Mercurol three times a day.

Case 9 had been taking other forms of mercury for six months. The form which had done him most good was bichloride. Yet 1-5 of a grain did not entirely control the disease. He had been taking that for two months when he was placed on Mercurol. The dosage in his case was pushed up to six grains three times a day, and at the end of seven weeks all his symptoms had disappeared.

Case 10 had been taking medicine off and on for two years, but his symptoms never disappeared entirely. After being two weeks on Mercurol (two grains three times a day) with the addition of potassium iodide, all symptoms had disappeared.

Ayers, in conclusion, states that he uses Mercurol in his private practice to the exclusion of all other drugs. His experience is that he gets better results. He has found no form in which mercury can be given with such good results as in that of Mercurol.

EDITORIAL NOTES AND CLIPPINGS

A New Health Officer for Burlington. —Considerable speculation is being indulged in as to whom the Board of Aldermen will select as City Health Officer at their forthcoming meeting. The names of several candidates have been announced, including that of the present incumbent, but little is known of the prospects of any. Among the physicians who have been mentioned in connection with the position, Dr. F. E. Clark is unquestionably most eligible. Dr. Clark is a young man who has had a wide experience during his eight years of continuous practice in Burlington. He was an honor man and a prize winner at the time of his graduation from the U. V. M. Medical Department, and is now connected with the same institution in a teaching capacity. In many ways he has demonstrated his ability and tact and since the position of Health Officer requires these qualities in a marked degree, no better man than Dr. Clark can receive the election.

It is no easy task to fill the position after it has been held by a man as able, energetic and conscientious as Dr. Watkins was, but we feel confident that Dr. Clark will prove a worthy successor. From numerous expressions we are convinced that Dr. Clark would be more acceptable to the medical profession than any other candidate thus far mentioned. Since the Health Officer can accomplish far more when he is in touch with his colleagues, this ought to be a strong argument in favor of Dr. Clark's election over his opponents.

MUSEUM AND EXHIBIT OF THE AMERICAN CONGRESS OF TUBERCULOSIS.

The Executive Committee of the American Congress of Tuberculosis have directed the appointment of a committee to organize a pathological museum and exhibit, and a large number of the Vice-Presidents of the Congress have strongly favored such action.

The Hotel Majestic, where the Congress will be held will provide a suitable room for the display on the floor above the parlors, near the session.

The delegates sent by the latter body to the London Congress speak in the highest terms of the exhibit presented in London.

Dr. H. Edwin Lewis, editor of the VERMONT MEDICAL MONTHLY, of Burlington, Vermont, has consented to accept the chairmanship of a select committee to collect exhibits for such a movement, and negotiations are now under way in order to make the project a success.

All curators of colleges and museums, or of medical schools or societies, and all members of the profession in the United States, the Canadas, or in South or Central American countries who are willing to loan or contribute specimens, drawings or contributions to such a collection for the use of that Congress, to be held at the Hotel Majestic, May 14 to 16, in the city of New York, will please at once communicate directly with Dr. H. Edwin Lewis, Chairman Committee on Museum, at Burlington, Vt., specifying contributions so that the same may be catalogued and the catalogue presented in advance of the session. The catalogue of the museum of the London Congress, occupied 200 pages of printed matter, and embraced drawings, maps, skiographs, photographs, engravings, charts, prints and contributions besides specimens, and illustrations of microscopic and biological work relating in any way to the subject.

If a favorable response is made to this appeal the collection will be a great public interest.

It is hoped that the laboratories of the Boards of Health of the cities and States of the Union and the medical colleges and schools will loan specimens of their work to this collection, and that the microscopists and students of biology, pathology and chemistry will enroll and co-operate in this laudable movement to extend the knowledge of the results attained by scientific endeavor in the great work of combating the spread of this great destroyer of mankind, Tuberculosis.

The Congress will hold its 1902 meeting May 14, 15 and 16, and all pharmaceutical firms who desire space should communicate at once relative to the same.

MEDICAL ABSTRACTS.

SODIUM SALICYLATE IN TREATMENT OF GALL-STONES.—Dr. Francis W. Davis, of Cincinnati, says, in *N. Y. Med. Journal*:—The treatment of gall-stone colic may be considered under two headings, medical and surgical. The medical treatment is prophylactic and symptomatic. While not a great deal can be expected in the way of preventive treatment, we are not justified in neglecting it. Among the drugs which are classed as cholagogues, there seems to be some ground for believing that salicylate of sodium aids in lipuefying the bile. The writer believes he has seen benefit from its use in some cases. He administers the drug in doses of about ten grains three times daily for about ten days, and preferably about two hours after meals. This treatment may be repeated every three or four weeks. When the constipation is marked, rather large rectal injections of cold water also aid in producing a free flow of bile. Of course, the patient must take them while in the recumbent position.

During an attack of the colic, if the pain is bearable by the patient, a poultice as hot as can be borne should be placed over the liver, and the heat maintained by frequent changing. In some cases the heat and moisture will ease the pain and keep the patient fairly comfortable

until the attack terminates. If the above mentioned measures fail to relieve the pain, the writer knows of nothing so effective as morphine given in relatively large doses by the hypodermic method. One-fourth or one-third of a grain may be injected, and repeated in an hour or two if necessary. If the attacks are frequent, or if from the constant pain and tenderness we are sure of an impacted stone or an infection of the gall-bladder or duct (which, by the way, causes colic as well as gall-stones), we should advise the patient to undergo an operation for the removal of the offending material.

Treatment of Leucorrhea.—Dr. R. H. Lacy in an article on "Leucorrhea and its Treatment" (*Texas Med. Jour.*, March), says: The treatment of leucorrhea is divided into constitutional and local; the constitutional treatment consists in building up the system, and as a general rule anemia is present, which should be overcome. Hare recommends the following prescription:

Acid arseniosi ....gr. ¼
Ferri redacti ....grs. 5
Quinia sulph..... ....grs. 20
Ft. in pill No. 20. Sig.: 1 pill t. i. d. P. C. for adult.

Of the local forms of treatment, hot astringent douches for the vulva and vaginal forms have given the best results, in conjunction with the constitutional treatment above named.

In the cervical variety, the first step should be to correct the cause. If due to a displacement or laceration, this should be properly attended to, which will relieve the condition, and if of a catarrhal character, curettage and the application of equal parts of iodine and carbolic acid, and the prescription as stated to overcome the anemia, will usually effect a cure.

The same applies to the intra-uterine. The canal after curettage should be dried as thoroughly as possible, and a solution of iodine and carbolic acid introduced on a cotton wrapped applicator, if necessary, carrying it into the interior of the uterus and making the application cover the entire mucous membrane.

This is usually followed by a copious discharge containing shreds of mucous membrane, epithelium and blood cells; this discharge subsides in a few days.

Three applications, as above described, is usually sufficient; these applications should be made about a week apart.

Cramps of the Legs.—Dr. John McDonald, after discussing the causation of cramps, their relation to the valveless condition of the inferior vena cava, and consequent great hydraulic pressure, to constipation with its pressure on the iliac veins, and to the gouty diathesis leading to the deposit of urates in the muscles surrounding the congested veins of the legs, says that in the remedial treatment of cramps the attention should be directed mainly toward (1) the relief of constipation; (2) the removal of the uric acid toxine; and (3) the establishment of a better nutrition.

It is obvious that for this purpose an effective cholagogue agent is of the first importance to stimulate cellular action of the liver, increase its normal secretions, and initiate peristalis; and that combined with an appropriate uric acid solvent, the circulation of the blood may be quickened, while at the same time its subalkalinity may be neutralized and oxidation increased by the removal of the toxine mainly responsible for the abnormal condition.

A more active interchange having thus been established between blood and tissue, the former being better enabled to perform its function of removing poisonous waste, the nutrition of the latter becomes improved, and the third indication is fulfilled. The author records a case of obstinate cramps treated successfully on these lines.—*Northwestern Lancet.*

New Method of Treating Syphilis.—Wear a bag containing mercury on the chest, a dram of the metal being poured into the bag each day.—*Bulkley, Denver Med. Times.*

STRAY THOUGHTS

From Everywhere, by Everybody and for Everyone who Wants to Read Them.

FATE.

Two shall be born the whole wide world apart,
And speak in different tongues, and have no thought
Each for the other's being, and no heed.
And these o'er unknown seas to unknown lands
Shall cross, escaping wreck, defying death;
And, all unconsciously, shape every act
And bend each wandering step to this one end—
That, one day, out of darkness they shall meet
And read life's meaning in each other's eyes.

And two shall walk some narrow way of life,
So nearly side by side that should one turn
Even so little space to left or right,
They needs must stand acknowledged face to face,
And yet, with wistful eyes that never meet,
With groping hands that never clasp, and lips
Calling in vain to ears that never hear,
They seek each other all their weary days,
And die unsatisfied, and this is fate.

—Susan M. Spaulding in *Detroit Free Press.*

"There is no place in the modern world for the unskilled; no one can hope for any genuine success who fails to give himself the most thorough technical preparation, the most complete special education. Good intentions go for nothing, and industry is thrown away if one cannot infuse a high degree of skill into his work. The man of medium skill depends upon fortunate conditions for success; he cannot command it nor keep it. The trained man has all the advantages on his side; the untrained man invites all the tragic possibilities of failure."—*Hamilton W. Mabie.*

BOOK NOTICES.

A Text-Book of Surgery.—By Dr. Hermann Tillmanns, Professor in the University of Leipsic. Translated from the Seventh German Edition by Benjamin T. Tilton, M. D., and John Rogers, M. D., and Edited by Lewis A. Stimson, M. D. Vol. I, the Principles of Surgery and Surgical Pathology. With 516 illustrations. Published, 1901, by Messrs. D. Appleton & Co., New York.

This text-book is a translation of the seventh German edition and has been arranged in three volumes. The first volume is devoted to the general principles of surgery and surgical pathology, and furnishes a clear and comprehensive treatise of these important subjects. The first section considers the following subjects: Preparation of the patient for an aseptic operation; general and local anesthesia; measures to prevent loss of blood; general rules of surgical procedure and for the after treatment; drainage of wounds; suturing of tissues; amputations, disarticulations and resections; plastic operations.

Section II is devoted to antiseptic and aseptic protective dressings; the application of bandages and other retention appliances; immobilization appliances and dressings and extension by weight.

Section III treats of inflammation and injuries, and includes also tuberculosis (scrofula) syphilis, leprosy, and actinomycosis; injuries and surgical dressings of soft parts; injuries and surgical diseases of bone; injuries and diseases of joints; military practice and gunshot wounds; and closes with a description of the growth, course, etiology, diagnosis, and treatment of tumors.

This work is so orderly and systematically arranged that it appeals at once to the reader. It is eminently scientific yet the text is simple and concise in its expression. Few works on surgery can compare with it for completeness and scope.

It is admirable in every respect and valuable alike for study or reference.

Guaiacol in Skin Tuberculosis.—A mixture of equal parts of guaiacol and olive oil is painted on the ulcerated area three times a day, after the crusts have been removed, and all exuberant granulations destroyed by a ten per cent solution of lactic acid.—*Jour. de Med. de Bordeaux.*

Medical Students.—In 1901, says the *Medical Standard,* the number of entries for the full curriculum in English and Welsh medical schools was but 757, or one to 42,000 people. In strange contrast to these numbers, the United States has more than 26,000 medical students, or one to 2,900 people. Chicago alone has more than 3,500 students and graduates over 700 annually.

THE NEWER REMEDIES.

SMALL POX THERAPY.—The prevalence of a mild type of small pox throughout the country gives the therapy of that disease especial interest at the present time. Vaccination is, of course, unquestionably not to be overlooked as a preventive measure, but in addition infection may be made much more unlikely and where infection has taken place, the course of the disease considerably shortened and shorn of its terrors by the administration of the valuable antipurulent ecthol. The Battle Company has just issued a pamphlet dealing with the use of Ecthol in this disease. The pamphlet should be in the hands of every physician who may be called upon to treat small pox. It will be sent to any physician who makes the request.—*Medical Fortnightly.*

THE VALUE OF SAMETTO IN SURGICAL OPERATIONS.—It is with pleasure that I attest the merits of Sametto, and I think my experience with the drug justifies all the good things I can say of it. I have used it very extensively, and especially do I find it valuable in allaying inflammation in the prostatic urethra before surgical operations, and in keeping the urine bland and non-irritating after the operation is complete. It always has a soothing and sedative effect upon the kidneys, bladder and urethra. I shall continue its use in all forms of genito-urinary irritation.

THOMAS P. GRAHAM, M. D.

Chicago, Ill.

SCIATIC PAIN—PROMPT RELIEF.—In reporting his experience in the treatment of sciatica, Fred E. Davis, M. D., of Brookside, Ala.,writes as follows in *Annals of Gynecol.:* "I have been giving antikamnia and heroin tablets a thorough trial in the treatment of sciatica and I must say that my success has been phenomenal indeed. I have also induced two other physicians to give them a trial and their success equals or surpasses my own. I meet with many cases of sciatica and until antikamnia and heroin tablets were introduced I was compelled to use a great deal of opium and morphine to relieve pain. Since then, though, I have not given either. One of my patients had been confined to bed for three weeks during her last attack of sciatica. I prescribed one antikamnia and heroin tablet every four hours and in forty-eight hours she was up and about and has not felt the pain since. I thank you for the introduction of this most excellent remedy and assure you of my willingness to report the results of still further investigation."

WHAT ARE YOU PRESCRIBING?—The popularity of any one product is a positive assurance that it will immediately have a host of imitators all greedy to secure the benefit of the reputation which it enjoys, due to its value. Inasmuch as substitutes are never as good as the original preparation and many times positively dangerous, it is unnecessary to warn our readers against knowingly using such goods. One of the most popular preparations, at the same time most extensively substituted, is Micajah's Medicated Uterine Wafers. Their intrinsic value in the treatment of diseases of women makes it imperative that the original only be used, and if you desire satisfactory results, and that the doctor prescribing should make it his duty to see that not a substitute is given his patient.

THE BEST ANTISEPTIC WASH.—To medical men who desire to use the safest and best antiseptic agent, Tyree's Powder will prove of great value; it saves the carrying about of bulky solutions; it makes a solution which is mathematically correct as to strength; it eliminates an element of danger, because it leaves no dangerous poison in the hands of irresponsible or ignorant people; its antiseptic and germicidal influence insures prompt destruction of all pathogenic microorganisms. As an astringent cleanser it abates all successive catarrhal or purulent discharges; it is a scientific commingling of agents, which have clinically

demonstrated their benign and curative properties without impairing the integrity of the tissue. The blending of these agents by a process of proportion and trituration renders it possible to obtain from them much better results than could be obtained if they were used separately or mechanically combined, and makes the use of Tyree's Powder both logical and reliable in all cases of obstetrical antisepsis. The speedy recovery succeeding the employment of Tyree's Antiseptic Powder in leucorrhea and gonorrhea, exemplifies the wisdom of using a rational remedial agent designed to accomplish a definite purpose rather than experiment with a cure-all—*Pediatrics.*

In respect to the curative properties of Gude's Pepto-Mangan, I have been particularly satisfied in the treatment of anæmia and chlorosis. In only one instance was there a complaint concerning some slight difficulty in digestion. Especially good results were obtained in a demented patient who took but very lttle nourishment, and it is my opinion that this patient is indebted to Pepto-Mangan, which she has taken for the last six months, for being still able to walk. Thanking you for your kind efforts, I remain,

DR. KNITEL.

Ebelsberg, Austria, August 8, 1901.

A GREETING TO THE NEW GRADUATE.—When Dr. Clark, professor of medicine in the College of Physicians and Surgeons, was in his prime, a member of the graduating class called on him for the purpose of having his chest examined. Having undergone the examination and received assurance that his lungs were sound, the young man asked the doctor what his fee was. "Oh, nothing, sir; nothing at all." "Why, how is that?" "Well, you know, dog doesn't eat dog." "What do you mean, sir?" "Simply that one doctor doesn't charge another doctor for professional services." "But, you know, professor, I'm not a doctor; I'm only a student." "Very well, dog doesn't eat pup." *N. Y. Med. Jour.*

THE EARLY RECOGNITION AND MANAGEMENT OF ARTERIAL DEGENERATION.—Louis Faugeres Bishop states that arterial degeneration is the penalty of chronic intoxication, whether this be of overwork, of alcohol, of a too rich diet, or of syphilis. It is the smaller arteries that first give the signs of disordered function by offering an unhealthy resistance to the circulation of the blood and causing tension. It is this tension that leads to organic changes in the body. All the symptoms so familiar in advanced arteriosclerosis may be seen in a shadowy form in the earlier stages of the disease. Degeneration frequently first manifests itself as a tendency. Heredity is a powerful etiological factor. However, the life of the blood vessels depends chiefly upon the use that is made of them. There are two classes of individuals most given to this affection, viz., ruddy-complexioned persons of the gouty diathesis, and pallid persons of the nervous diathesis. The management of arterial degeneration consists more in hygienic measures than in the administration of drugs. Two drugs are distinctly contra-indicated in the early stages, namely, iron and digitalis. The persistent use of alkalies, the abundant use of water, and the use of bitter tonics in small doses about complete the list of drugs useful in this affection. In neurasthenics, the bromides are of great value.

BENJAMIN F. SUTTON, M. D., University of Vermont, Burlington, 1860, a prominent physician and citizen of Addison County, Vt., died at his home in Middlebury, Vt., from pneumonia, March 11, after an illness of one week, aged 66.

APPENDICITIS OR TYPHOID FEVER.—Richardson states (*Boston Medical and Surgical Journal*, Jan. 9) that absence of rigidity or tenderness in the presence of fever and pain, usually signifies typhoid or simple continued fever. Pain, tenderness and fever without rigidity excludes a localized peritonitis but not an intra-appendicular lesion.

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ORIGINAL ARTICLES

PROSTATIC HYPERTROPHY AND ITS RELATION TO HEMORRHOIDAL OPERATIONS.

By Dr. W. W. Townsend, Rutland, Vt.

Having seen within the past seven years three cases of acute prostatic inflammation in "Prostatics," upon whom operative treatment for hemorrhoids had been resorted to,has led to the investigation that suggests the title of this paper. In all three cases the degree of inflammatory action has been in proportion to the extent of surgical interference, which rather proves the theory which I advance.

By reviewing in brief the anatomy of the veins of the rectum it will be seen that there are three sets of rectal veins as there are three sets of arteries. The superior, middle, and inferior. These are arranged so as to form two distinct venous systems. The one, the rectal, returning its blood to the vena portae, the other, the anal, returning its blood through the internal iliac. The first rectal, is made up of the superior hemorrhoidal vein. The second, or anal, is made up of the middle and inferior hemorrhoidal veins, the middle returning its blood from the anal region and the inferior from the integument. Thus it will be seen the superior empties its blood into the vena portae, via the mesenteric vessels, and the internal and inferior hemorrhoidal empty into the internal illiac, via the hemorrhoidal plexus which forms a free anastomosis with the vesico-prostatic plexus. These veins are not provided with valves consequently a dilated and varicosed condition is made possible. Very little is given by Gray in regard to the veins of the prostate, merely stating that "its veins form a plexus around the sides and base of the gland" which of course is the vesico-prostatic-plexus, receiving as it does the dorsal vein of the penis anteriorly, and it is in direct communication with the hemorrhoidal plexus posteriorly. Considering the intimate relationship of the venous system of the prostate and the rectum, it seems to the author that in looking for a cause of the acute exacerbation of inflammatory action in the following cases to be cited, the possibility of the operative procedure on the hemorrhoids should be considered as an etiologic factor.

Case No. 1—R. M. S., aged 67, white, widower, no children. Never had venereal disease, enjoyed good health up to six months prior to presenting himself, has noticed for some time that his stream was getting smaller and his urine "dribbled," has had considerable pruritis around anal region, and upon investigation by his physician was told that he had "piles." He then consulted a rectal specialist who advised an operation which was performed one month prior to my seeing him, the clamp and cautery operation was done and several tumors were removed. Shortly after this procedure he found that his urination was painful, and was accomplished with more difficulty than previous to the operation. These symptoms continued until a retention manifested itself and I was requested to see him.

Examination revealed a moderately enlarged prostate, sensitive, and soft. Upon firm palpation, induration could be made out showing that the patient had a sclerotic enlargement of the gland, but at that time the same was acutely inflamed and congested. Urine was acid and showed no trace of septic cystitis. Ordinary treatment as used in acute prostatis controlled the symptoms, and in three weeks the patient was around and voided his urine as

* Read before Rutland County Medical and Surgical Society.

before. After convalescence I determined that he had 30 c.c. of residual urine, and advice as to bladder lavage and hygiene, has kept him comfortable up to the present time, so far as I know.

Case No. 2—Was seen by me in consultation four years ago, at which time he presented all the symptoms of a chronic prostatitis. Was able to perform voluntary micturition leaving, however, a residuum of 60 c.c. I was called at the time by his medical attendant to make a cystocopic examination as a vesical polypus was rather anticipated, but the hematuria occasioning this belief proved to arise from an ulcerated prostate which was treated. The patient followed out instructions as to hygiene, mode of life, and lavage most religiously, and had absolutely no trouble for three years with the exception of some itching "piles" after consultation which he was advised to have treated. The treatment consisted of a method I know nothing about, but am informed by the physician who administered it, that it was an injection method, and that the piles were cured and obliterated; certainly there was nothing but cicatrices remaining in the rectum at the time I saw him. The night following the last treatment I was summoned at 2 A. M. and found patient suffering greatly from acute retention and ineffectual efforts to catheterize by a member of his family. He at this time recited to me the history of the pile treatment and remarked that he had experienced more or less difficulty with his urination since the first seance. Rectal examination showed the prostate to be greatly enlarged and fluctuating, giving the feeling to the finger similar to that presented by a prostatic abscess. This case gave me no end of trouble, as the bladder was septic and following the slightest instrumentation a urinary chill would follow. After persistent treatment during which prostatectomy was entertained, the inflammatory condition subsided and he regained the condition he was in prior to the pile treatment and is now catheterizing and lavaging his bladder once a day, and during the interim emptying the viscus voluntarily with the exception of the 60 c.c. of residual urine.

Case No. 3—Was referred to me by a physician who operated on him for piles, believing that the piles, by reflex irritation, produced the incontinence, which was simply the overflow from a distended bladder. At the time I saw the patient he was suffering from acute retention and severe vesical colic, and presented symptoms in regard to prostatic inflammation similar to Cases Nos. 1 and 2. This case ran the course of all acute cases of prostatitis and responded to the usual treatment.

Examination of the pathology of the hypertrophied prostate discloses the fact that there is an increase in all the normal elements, fibrous, muscular, and glandular, producing a symmetrical enlargement, and besides this uniform and symmetrical enlargement there is a tendency of the fibrous and muscular elements to form into distinct nodules of spherical form. The growth of these tumors cause them to elevate and protude from the surfaces of the prostate offering the least resistance, that is, the urethral and vesical surfaces. As these are not hemmed in by firm fasciae, consequently it will be seen that a hypertrophied prostate does not always retain the uniform shape of the gland. These nodules protrude into the urethra and distort and obstruct that canal to such an extent that oftentimes it is consequent upon the symptoms arising from the obstruction that the presence of an enlarged prostate becomes known. It is well understood that the growth of the normal elements of the gland and the formation of the nodular tumors interfere with the circulation through the gland and bladder, and in consequence, the prostatic plexus becomes congested and a dilated and varicosed condition exists of all the veins adjacent thereto, and it is due to this fact and the straining efforts to urinate that hemorrhoids exist in 85% of all cases of prostatic hypertrophy. This and the study of the cases recited, makes me believe that by the pro-

duction of these varicosities, and dilations in the prostatic plexus and hemorrhoidal veins, nature is making an effort to compensate for the congested and interrupted circulation in the prostate, produced by the hypertrophy. And if this is correct, why would not an operation or any treatment destined to obliterate the vein interfere with nature's effort to equalize the circulations? Then by disturbance of such equalization, the prostate would become congested and a subsequent inflammatory action follow, thus an acute prostatitis, or more properly an acute exacerbation of an already chronically inflamed and hypertrophied gland, would exist.

In conclusion, I will state that I am aware that there are innumerable causes that produce the symptoms of acute inflammation in prostatics and it may be in the three cases cited I am mistaken in ascribing the cause to the hemorrhoidal operations. But I believe the subject is one of sufficient importance to justify the writing of this paper in the hope that it will promote investigation in others along this line to determine if hemorrhoidal operations in prostatics intensify or increase the inflammatory condition of the gland to such an extent as to produce acute prostatitis, with its attendant rigors and pyrexia. If so, when treatment for hemorrhoids in these unfortunates is demanded,why should not a more palliative measure be taken tending to encourage the circulation rather than obliterate, since the latter disturbs and further congests an already congested and chronically inflamed area?

In children, says International Journal of Surgery, in the differential diagnosis between fractures and dislocations, it is always well to remember that the latter are very rare in childhood because the muscular power of children is comparatively small, because of the presence of epiphyseal cartilages, and because the soft parts about the joints are so soft. They are also uncommon in the old, because here again the muscular power is diminished and the bones are more brittle.—*Am. Jour. Surg. and Gynecology.*

WHAT IS THE TRUE VALUE OF ALCOHOL? *

By Geo. W. Sargent, M. D., Seneca Castle, N. Y.

Several remarks heard casually from different physicians illustrate the somewhat confused state of opinion in the profession concerning alcohol.

"I sometimes think it does more harm than good." "I don't wait till a patient gets to a low point, but begin from the first to support with whiskey." "Yes, I use it, but I use it as I do strychnine or any drug, and try to make sure that the indications really demand it."

The third, it seems to me, with our present knowledge, is the nearest right. Some practitioners never employ it. The truth about alcohol is hard to find. Everything is uncertain and contradictory. Good testimony on one hand is contradicted by equally good testimony on the other. Some believe alcohol to have stimulating properties. Others are positive that it is paralyzant throughout its whole range of action. It is recommended as a food in moderate quantities, and denounced as a poison even in small amounts. Formerly there were few to question its value. If anything has been well entrenched in custom it is alcohol. Good to withstand heat; good to withstand cold; good to give more strength for labor, mental or physical; good in consumption; and good to ward off infection. We now know that in all these cases it is bad and not good. Step by step experience has caused it to be given up. Even in Germany the much vaunted drinking of light beers is under suspicion. Still, alcohol retains a hold on society, professional and lay, dies hard, not quite moribund but dying. Most physicians probably believe in it as a necessary remedy; yet those who have been in practice twenty years will be likely to testify to less frequent use of it than when they began. The expense for alcohol

*Read at the quarterly meeting of the Ontario County Medical Society at the Clifton Springs Sanitarium, April 15, 1902.

in the Massachusetts General Hospital is stated as having fallen from $1.48 per patient a year in 1884 to 29 cents a year per patient in 1900.

Clinical evidence seems to prove its beneficial properties, but there is no unquestionable scientific evidence for it. Can we come to any just conclusion regarding its value?

Morally one must feel the need of caution in recommending it because it is one of the drugs peculiarly liable to abuse. Repeated, or constant employment generally demands constantly increasing doses. There is also danger of physical harm from its habitual use even in small quantities. Above all, the showing that 70% of all crime is due to intemperance is sufficient reason for care in prescribing alcohol, and for holding it strictly within its limitations.

In respect to the action of alcohol physiologically, nothing seems to be actually established. The evidence to prove that 1½ or 2 ounces of alcohol per day are available as food, seems conclusive along certain lines, but any settlement of the question appears to depend on one's conception of what a food is. A substance like alcohol, which is conceded to have a selective poisonous effect on the tissues, especially the nerve centers, not only in large but in small quantities, does not come up to the common idea of a real food. If, in certain doses and for a limited time,it provides support like a food, this limitation and the fact that, all the while it may exert deleterious effects, destory its claims as a true food and designate it more correctly as a drug.

The evidence of its value as a stimulant to the heart is almost entirely clinical. Good clinicians and high scientific testimony cast doubt upon this point, the apparent benefit to the heart being attributed to its action on respiration and to reflex action. It is certain, admitting it to be a heart stimulant, that this effect is transient and is quickly succeeded by depression. Here lies the danger in practice of exceeding the proper dosage and of mistaking the indications. One may easily, in the words of Wood, put a nail in the coffin of his patient by over-stimulation. The two indications, to furnish support and to stimulate the heart, are practically the only ones for which alcohol is, or should be employed in medicine, and it does not require much research to find, that writers in support of alcohol for these purposes, do not speak with the same certain sound as formerly. It is condemned quite generally as a stomachic and tonic. We know that well people do not need it. To such, if it is a food at all, it belongs in the class of luxuries.

We know that habitual use, even in moderate quantities, induces changes known as alcoholism. Actuaries state that alcohol shortens life, and that the drinker has an expectation fifteen years less than the abstainer.

We know that it weakens the natural resistance to heat and cold, and to infectious diseases.

We know that, on a long march, or in the performance of any severe labor, mental or physical, it is harmful.

Though it may be taken as a restorative, or pick-me-up, such use is dangerous and as apt, perhaps, to do harm as good by the reaction.

Thus the general tendency of alcohol is to weaken and kill. It has been well called the evil spirit, *Al Ghole.* Nevertheless, in sickness it seems to change character and becomes a supporter during certain periods, and a stimulant to the heart when there is danger of heart failure. At the same time the indications for employing it are not always so peremptory as to render it superior, if equal, to other remedies, while, if its exhibition is premature or prolonged, it must exert the same baleful effect as in other conditions where it has been tested.

It is, therefore, a means of limited value,one to be restricted to narrow fields, not to be used throughout the whole course of an illness, but confined to certain stages and critical periods, and to certain accidents and emergencies.

PARETIC DEMENTIA.*

By J. M. Clarke, M. D., Burlington, Vt.

Proprietor and Director Lake View Sanitarium. Member Vt. State Med. Society, Burlington Clinical Society, etc , etc.

"Paretic Dementia," "General Paralysis of the Insane," "Progressive Paresis," "General Paresis," "Paralytic Insanity," are the different names of this complicated disease. I think the first, "Paretic Dementia," the most desirable as indicating both the mental and physical degeneration. It is very properly conceded to be a distinct form of insanity,and is so classified by writers on mental diseases. While in the first stage there are symptoms common to other forms of derangements it soon develops its own distinctive characteristics. It is indeed the most terrible of all mental troubles as well as the most fatal.

The French physicians were the first to classify paretic dementia. Esquirol recognized the incurability of insanity when complicated with paralysis.

In looking up the history of our subject, I will briefly mention that in 1822 Bayle concluded that mental disturbance and paralysis are the same and attributed them to chronic inflammation of the arachnoid. M. Delaye in 1824 thought it was not always accompanied by insanity and was a softening or atrophy of the brain. In 1826 M. Calmeil gave a most complete account of it, and to him is frequently ascribed the merit of having been the discoverer. From that date, at any rate, the disorder has been mentioned by all who have written on insanity, and many have devoted much labor to the investigation of the symptoms and pathology.

In England, Sankey, Lockhart Clark, Wilks, Bucknill, Tuke, Critchton-Brown, Major, Mickle, Clouston, and others have contributed the result of their observations of the disease. Paretic dementia is a fatal malady, and hundreds die of it every year in the asylum and other institutions throughout the country. It has been said that it presents three or four stages in its progress,—I think three stages are usually to be distinguished.

In the first stage we have the commencement, or if you please, period of incubation. In the second we get the acute mechanical period. The third is the stage of chronic mania running into dementia with utter exhaustion of both mind and body, to be followed immediately by death. In the beginning those who are familiar with the patient, notice in him an alteration. The changes at this time are similar to those which occur in the commencement of other forms of insanity. The changes noticed are in his manner, habits and talk. He may be morbid, taciturn, or silly. He becomes freakish, and irregular in business, where before he was regular and methodical. The quiet careful talker becomes garrulous and silly, the well dressed man becomes slack and shabby; or fanciful and dandified. Irritability is quite noticeable. Change of every kind in feeling may and frequently does take place. This change may be gradual and usually is, or it may be rather sudden. The family will say they can look back and remember many strange things that he did, "but at the time did not think much of it." After a time his acts and manner will take on an extravagant cast. Often shown by useless expenditures of money, making costly presents to strangers as well as those he knows. He makes very unusual propositions, careless in his appearance, neglects his appointments, extremely restless, forgets the time of meals, and the names of those about him, gives absurd orders to his servants and raves when they are not executed in an instant. There is a want of method in his madness not noticed in other forms of derangement. One important symptom is noticed early,—that is forgetfulness. He forgets what he said and what he did last. Business is neglected or very much mismanaged. He performs acts of dishonesty or debauchery. At this time some cases exhibit indecent acts like exposure of person,—going about scantily

*Read at March meeting Burlington Clinical Society.

dressed, etc. These characteristics may be multiplied without end, but enough has been said upon this stage of the disease.

During this time the patient is rarely seen by an alienist, or perhaps not by the family physician. When the doctor's attention is called to the peculiar manner or acts of the patient, he may be and probably is at a loss to account for them except on the grounds of a deranged mind. But these changes do not indicate paretic dementia any more than some other forms of insanity. This condition may go on for several weeks or months, when a new feature sets in , and the patient passes into the second stage, which is that of excitement.

The condition we now have is one that requires some decided action on the part of his friends and the physician. While before his actions had been unusually absurd, perhaps disgusting, he is now exhibiting more activity and rapidly becoming unmanageable and dangerous, in short, he has a mania. We now begin to get the grand delusions. Probably 19 out of 20 paralytic patients have ideas of greatness, importance, and especially of immense riches. They think themselves the most wonderful people alive and able to perform any imaginable undertaking. The poor man may think himself a very rich one and buy a carriage and horse under a common delusion, which he, of course, cannot pay for, but a paralytic will tell you that he is a king, a prince, and a president all at one time. That he has a hundred million horses, mountains of gold, thousands of servants, bushels of diamonds, and that he is to marry some queen, etc., etc. There is no danger of writing these delusions too strong.

Patients in ordinary forms of insanity generally hold to their delusions, at any rate for a time. But the paralytic forgets to-day what he thought or said yesterday, and tomorrow will probably differ from to-day. To them it is a continued round of grandeur, happiness and wealth, day after day as the unfortunate man's mind goes on to a miserable future.

Everything about him is of priceless value. The most ordinary form of dress or ornaments become robes and jewels, and when failing strength lays him low and he cannot raise a hand, he may tell you he is stronger than Samson. A general "good feeling" is always present in these cases; and so strong is the idea that they will tell you they never felt better in their lives, when they cannot even feed themselves.

Very rarely a case may present delusions of fear, of being arrested for some imaginable crime, or that he has committed a sin never to be forgiven. In connection with this medley of mental symptoms I have mentioned as coming on in the second stage, we will look for physical symptoms to confirm the diagnosis. Nervous disease or insanity is often recorded as having occurred in the progenitors, but paretic dementia in most cases appears without hereditary predisposition. Heredity does not play an important part in this form of insanity as it most surely does in all others. One very noticeable symptom in this stage of the disease is defective articulation. If you closely watch the man while speaking, you will notice a defect more or less marked, a stop or a stutter,—a sudden jerking out of a word or syllable which may recall to your mind a man in a certain stage of alcoholic intoxication, and in fact paralytics have been arrested for intoxication simply on account of their deficient articulation. It is not an ordinary stammering nor the defective articulation of the hemiplegic, but there seems to be an effort to get the word out, and he may have to shout in order to do it.

The muscular action of the lips is also diagnostic as well as the tremor of the tongue. In most cases, not always, a tremulous action, a twitching like that seen in a person about to burst in a fit of weeping is seen in the lips, particularly the upper. Not only the lip tremor and the so-called "thick tongue," but you may notice the twitching of the facial muscles and those of the forehead. The defective speech varies from slight stammer which may have

been previously overlooked, up to a degree that renders the man absolutely unintelligible. This last occurring in the latter part of the disease. Now he becomes more and more altered in his habits, dress, and action, and as a rule difficult to manage in regard to these matters. This is the violent stage, and when he is opposed will attack in a blind fury any and all about him, regardless of the consequences, and it is evident by this time that the patient needs the restraint of some institution. About this time he may have a fit; this may occur early or later in this stage of the disease, and resembles epilepsy. But the convulsions are not violent; they do not bite the tongue; there is no cry; and the mental symptoms are quite different afterwards. Some cases have frequent fits, while others have few, and some not at all. The pupils of the eyes are frequently unequal, not always. There is at this time a change in the gait of the patient. He may be slow, anxious, shuffling; they may walk as about to run, and jerk the legs forward with a sudden movement.

Let us now pass along a few months, to the third stage or stage of excitement or actual mania. The patient is at times angry, violent, filthy, destructive; or at times if not opposed, very good natured or silly, easily pleased or pacified. He looks stupid when at rest; stutters, or twitches his facial muscles whenever he attempts to speak. During this time he sleeps and eats well, as a rule. Often there is difficulty in swallowing the food he stuffs into his mouth. This maniacal period presents many peculiarities too numerous to enumerate and would occupy time far beyond the proper length of any paper.

After a few months, or possibly weeks, a marked improvement may, and often does take place in all the symptoms. The excitement grows less, or leaves altogether; habits improve; manner changes for the better; speech and walk grow more natural. But the principal improvement will be in his mental state. To such an extent does the change for the better go on that the patient may be considered very greatly improved, or even recovered. Vain hope, for within a few months a relapse comes on and all the old symptoms return with renewed activity. It is now a continuance of hopeless dementia. The patient can just walk about, supported by an attendant. His countenance is vacant and puffed. He takes little or no notice of what is going on about him, and pays no attention to conversation. He grows thin and weak, and at last is put to bed for good. Here his skin rapidly gives away and bed-sores result which are most impossible to heal, as faeces and urine are passed in bed. The power of deglutition is feeble and great care is necessary, or your patient may choke to death.

This is the final stage on the down grade and your patient finally dies from exhaustion.

In regard to duration of the disease, authors are pretty well agreed that three years is the limit, and may be less.

This is a disease of middle life from 35 to 55. Men are the victims. Probably 8 out of 10 cases of true paretic dementia are men.

CAUSES.

Claims are made that syphilis is the one great cause, of course associated with others. Clevenger in Medical Jurisprudence of Insanity, Volume 2, says: "Investigation proves that in three-fourths of these cases syphilis has antedated paretic dementia at some early period of life, but it is by no means proved that syphilis is the only predisposing cause." The exciting causes are mental over-strain and alcoholic stimulation. Business and professional men are the usual victims.

The fact that alcoholism and syphilis cause a form of paretic dementia from which patients recover under appropriate treatment go to show that the functional derangement of the brain is the primary trouble. Though when the disease runs its usual course there can be no doubt that organic ravages attend it. Every tissue appears implicated eventually, and even the bones, as in locomotor ataxia, become fragile.

Mental symptoms usually precede the physical, but occasionally the reverse is true. This is a destructive brain disease producing atrophy of the evolutions, often softening, inflammation and thickening of the membranes, frequently small clots in the vessels, and a general disorganization of brain function.

So far as my experience goes, I never knew a recovery from paretic dementia.

CASE OF TUBAL PREGNANCY. OPERATION—RECOVERY.*

By A. Lapthorn Smith, B. A., M. D., M. R. C. S., Eng.

Professor of Gynecology in the University of Vermont, Burlington; and Professor of Clinical Gynecology in Bishop's University, Montreal; Gynecologist to the Western General Hospital and to the Montreal Dispensary; Surgeon-in-Chief of the Samaritan Free Hospital for Women and Consulting Gynecologist to the Woman's Hospital, Montreal; Fellow of the American and British Gynecological Societies.

This case was especially interesting to me because it was the twenty-first case of tubal pregnancy on which I have operated, all of whom recovered. For this gratifying result I do not take any credit to myself but attribute it rather to the cleverness of the fifteen medical friends, most of them my former pupils, who diagnosed the cases and at once insisted upon the patient being placed in my hands for operation.

This case should be especially interesting to the readers of the VERMONT MEDICAL MONTHLY because two distinguished practitioners of Burlington had the honor (which I consider one that any doctor may be proud of) of making an early diagnosis of the exact condition and which was absolutely verified by the operation: I refer to Dr.H.Edwin Lewis, and Dr. Tinkham the Dean of our Faculty, whom I here wish to thank for their courtesy in adding one more to my gradually growing list of successful cases.

Dr. Nye, the house surgeon of the Mary Fletcher Hospital at Burlington, obtained for me the history of the case which I will give in as few words as possible.

Mrs. X, 23 years of age and a resident of Burlington; first menstruated at 14, normal; she was married at 22; had one child a year ago when the labor was easy without instruments. She never had any miscarriages. Dr. Tinkham had attended her some years before her marriage for curvature of the spine and later she came under Dr. Lewis' care for pelvic peritonitis, at which time she was employed as a waitress at a hotel.

She had had no period while nursing her baby until about the first of January, 1902, when a flow came on accompanied by severe pain and the expulsion of clots. Dr. Lewis, who was called first, examined her and found the right tube enlarged and the uterus apparently empty, and as the flow, instead of stopping at the end of three days kept on for the whole of January, he made the diagnosis of tubal pregnancy, and called Dr. Tinkham in for consultation. The latter confirmed Dr. Lewis' diagnosis and the patient was sent to the Mary Fletcher Hospital for operation. As her condition was not urgent she was put on preparatory treatment, but she was closely watched for severe hemorrhages or any other symptoms indicating immediate action. Before coming into the hospital her temperature was 104 and her pulse 120, but at the time I saw her, a week later, they were 102 and 100 respectively. On examining her I found a distinct mass on the right side pushing the uterus over to the left. The high temperature and the comparatively low pulse led me to believe that there was no active bleeding going on but that the inflammatory process by which the peritoneum shuts off the foreign matter, placenta and blood, which were thrown into it through the ruptured tube, accounted for most of the high temperature. Like all these cases she was a bad subject for operation, but as several of my cases were so nearly dead from hemorrhage as to require practically no anaesthetics, and yet recovered, I would never allow the condition of the patient to deter me from remov-

* Read before the Clinical Society of the Montreal Dispensary, March 14, 1902.

ing the cause of her bad condition, for until this is done there is no hope of cure.

At 8.30 A. M. I opened her abdomen. I was assisted by Dr. Nye and instead of nurses there were four or five fourth year students, two of whom attended to the sponging and two to the instruments. (I may mention in passing that they performed their duties in a most satisfactory manner and without the slightest break in the asepsis; and the Dean informs me that it is a very attractive privilege to the students to be allowed to take part in the operations in this capacity.) Owing to her weak condition ether was chosen as the anaesthetic. A single incision brought us down to the peritoneum which was picked up and cut between two forceps; then we came upon the omentum which was attached so firmly to the abdominal wall at the level of the symphysis pubis that several inches of it had to be tied and cut off. Then a coil of small intestine enormously thickened was peeled off the back of the uterus and right broad ligament where it was acting as one of the boundaries of the cavity containing the placenta and blood. On detaching this there was a distinct fecal odor which combined with the ragged and torn appearance of the bowel, made us fear for a moment that the latter had been torn. But on careful examination this was found not to be the case, the gas which was smelled having passed into the cavity by osmosis. The torn and bleeding intestine was laid on the abdomen and treated by pressure with hot sponge while I spent a quarter of an hour digging out the disorganized ovary and tube which were adherent everwhere with two sets of adhesions, some recent ones dating back about a month and others more dense of about two year's standing, which required to be ligatured. During this process I came upon the vermiform appendix dipping down into the pelvis and firmly adherent; it was tied level with the bowel, cut off and the stump was cauterized, and then covered with peritoneum from the meso-appendix. This was different from my usual procedure; in the 15 or 20 cases in which I have had to remove the appendix in the course of enucleation of pus tubes and tubal pregnancies I have always cut the appendix off flush with the cæcum and then closed the small slit left in the gut with three Lambert sutures of fine silk, which plan completely does away with secondary abscess from sloughing of the stump and fecal fistula after the stump has dropped off, as of course mucous surfaces will not adhere to each other, no matter how tightly tied.

All the time that the mass was being dug out, everything was bleeding until a ligature was placed on the ovarian and uterine ends of the broad ligament, when it gradually stopped.

The coil of small intestines, which was still bleeding, was then sewed up with fine catgut and returned. I consider it a bad omen to see the intestine at all, and worse still to touch it; while to have it out and cooled with hot sponges which quickly become cold, makes the case quite serious. The patient's condition was poor all through so that she was closed with through and through silk worm gut, as rapidly as possible. When she left the table she was almost pulseless, but this did not discourage me as several of my other cases were pulseless before the operation had begun, and yet they recovered eventually. But something happened to this case which never happened to any of the others and which nearly caused the first death in this long series of recoveries. I wish to thank Dr. Andrews, the Superintendent of the Mary Fletcher Hospital, for his heroic efforts in the emergency which were happily crowned with success. The patient received a pint of salt solution by high rectal injection several times in the next twenty-four hours, which brought up her pulse somewhat; but about twenty-four hours after the operation she began to become cyanosed and would doubtless have died had not Dr. Andrews promptly administered oxygen and cardiac stimulants almost constantly for two or three days. Gradually she rallied and her color re-

mained good without the oxygen and then she made a rapid recovery. This cyanosis was probably due to heart failure from hemorrhage and spasm of the vasomotor nerves from reflex irritation of the sympathetic, during the prolonged handling of the intestine.

Just a few general remarks before closing this short report. From my experience the prognosis of tubal pregnancy is remarkably good, and just one condition, namely, that the condition is recognized and acted upon early. I have lost cases of every other serious abdominal operation but I have not lost one of these patients. One of my third year students diagnosed a case in the person of his landlady after having heard my lecture on the subject, when he went home and examined her. He called me to see her next day and a few hours later I operated and found a ruptured tubal pregnancy. Another of my former students, Dr. Warren, has diagnosed four cases and called me in to operate; while another of my students, Dr. Sylvester, has sent me three. Was it chance or skill that enabled them to do this? I believe that it was the latter for the following reason: Just to take one instance, the last case Dr. Warren sent me had been attended for three days by two other doctors who made light of the case, telling the dying woman that it was only indigestion. It was by chance, perhaps, that Dr. Warren was then called, but it was not by chance that he discovered the abdomen full of blood. The moral of this is, let everyone look for cases of tubal pregnancy and they will now and then find one. Irregular hemorrhages in a young woman and a mass to one side or behind the uterus with enlargement of the breasts are the most prominent symptoms.

248 Bishop Street, Montreal.

DIABETES.—It is stated by van Noorden, *Wiener Klin. Worchenschrift,* that the tolerance of the system for carbohydrates in diabetes is very much increased by the use of salicylic acid. This is unusually beneficial in those who tolerate from 100 to 150 grams of bread. —*Jour. Amer. Med. Asso.*

SMALL POX, WITH SOME REMARKS ON CASES IN MENDON, MASS.

By J. M. French, M. D., Milford, Mass.

On Monday, January 13, 1902, I was called to Mendon to see Erwin A. Snow, aged 54, who had been taken ill the day before. I found him sitting up, not suffering very much, temperature moderate—I think it never went above 100.5—and with the general symptoms which are common to half a dozen febrile maladies. The next day he complained of backache, but this was never very intense. The most noticeable symptom in the case was severe headache, made worse by lying down, and always worse towards morning.

The provisional diagnosis of grip was made. There were no cases of small pox in town, and no known opportunity for exposure, though cases had occurred in several of the neighboring towns.

There was no essential change for several days. On Friday morning he spoke of a sore throat, but inspection showed only a diffuse redness. There was also visible on this day a solitary vesicle on the outer side of the left ear; but I gave it little thought. On Saturday morning, however, a number of similar vesicles had developed on the forehead, face, chest, body and arms—perhaps 25 to 50 in all. They seemed to have sprung up in the night, like Jonah's gourd, and not to have gone through the usual stages of development. They were never macules, or even pimples, but were vesicles from the first—and they never became pustules, but simply dried up and dropped off.

There was perhaps a slight suggestion of varicella in the case, but it was only slight. Besides, he had had the disease many years before. I had never seen anything like it, and in view of the wide prevalence of small pox, I deemed it a suspicious case. There was on this day considerable sore throat, with a few white patches, just enough to suggest the possibility of diphtheria. Returning home, I

* Read at a meeting of the Thurber Medical Association, April 3, 1902.

asked Dr. M. W. Knight to see the case with me. He consented, and we visited it at once. He agreed with me that the case was a suspicious one, and expressed to me his belief that it was small pox. But neither he nor I had ever seen a case of unmodified small pox, and therefore we thought it wise to secure expert advice.

We left directions to keep out all callers, using the plea of possible diphtheria as an excuse. The family were frankly told our suspicions, and the course I proposed to take, but were charged not to lisp the name of small pox to anyone outside the house, until the matter was decided, as I did not wish to give any false alarm.

At 11 A. M. I telephoned to Dr. Abbott, Secretary of the State Board of Health, asking him to send out Dr. Morse, the expert employed by the Board to investigate cases of contagious disease. But Dr. Morse was away on a similar errand in another part of the State, and I was unable to get him until the next day.

I therefore visited the patient again that night, and vaccinated Mrs. Snow—who had been vaccinated in childhood—and the four children, none of whom had ever been vaccinated.

Dr. Morse came next day at 11 o'clock, and promptly pronounced the case unquestionably small pox—varioloid, to be sure, but "I call it all small pox, for it is all one," he said. He questioned Mrs. Snow as to the reason why the children had never been vaccinated, and brought out the fact that Mendon had been for years a stronghold of the "antivacs," the selectmen and school committee never having required or even advised the vaccination of school children; with the result that Mendon had a larger proportion of unvaccinated persons within its limits than any other town for miles around.

At Dr. Morse's suggestion, I re-vaccinated the mother and four children the next morning, in order that there might be no failure to "take."

I had already turned the case over to the Mendon Board of Health, who were in this case the selectmen, and I now awaited developments. The patient was up and about the house, or rather about the one room to which he was thereafter restricted, and his condition continued to improve from the time of the appearance of the eruption. The chief interest of the case now centered in the wife and children.

The Mendonites were stiff-necked and unbelieving, calling it all chicken pox, and saying various uncomplimentary things about all the doctors concerned, and especially crying out against vaccination as an invention of the devil —and the doctors. The local newspaper correspondents took a hand in the discussion, the doctors responded somewhat warmly, and for a few days the wordy war waxed warm.

The Board of Health put up red flags, and set a man to keep off intruders. It soon become evident, however, that no one was anxious to intrude, even if the case was only chicken pox. Even the great opponent of vaccination, who went so far as to doubt (in theory) the contagiousness of small pox, very promptly declined my urgent invitation to attend the patient in the capacity of nurse. "Tell Dr. French I am not posing as nurse," was the word he sent back.

The school committee, not having the courage to order a general vaccination of all school children, closed the schools for three weeks, and *advised* vaccination.

Meantime I lay low and watched the vaccinated arms. At least two persons, the chairman of the selectmen and a teacher in one of the schools, had visited Mr. Snow on Friday, just before the appearance of the eruption. These I vaccinated with the rest; and in every case, including Mrs. Snow and all the children, the virus produced its typical effect.

Nevertheless, on Saturday, January 25, the

seventh day after he was vaccinated, Fred Snow, the boy, began to show the unmistakable symptoms of small pox. The fever, headache, backache, and vomiting, all came in their turn, and were followed by an eruption which covered almost the entire body. When fully developed, the face was one mass of scabs. On the body the sores were distinct but deep. The case took the usual course, as laid down in the text-books, and recovery ensued in due time. No other case has thus far appeared.

The interest of the public—especially the unbelieving public—in the case, was somewhat increased by the fact that midway in its progress, the patrol who was employed to enforce quarantine, came down with a typical case of measles. It was known that other cases of this disease were in the village, and the source and even time of the man's exposure were known. Still, that one man should have small pox, and another who was walking the streets in front of his house, should have measles, was too much for the antivacs, and they gravely questioned—at least so said the Yellow Journal—whether the first man had measles, or the second man had small pox—or the doctors didn't know what it was, anyway. But "the stars in their course fought against" the antivacs and unbelievers, and even Dr. Pfeiffer, the great head of the antis in Boston, by his asinine folly, resulting just at this time in his illness from the same dread disease, did much to kill the cause he had espoused. So also, a letter from the Secretary of the State Board of Health to the superintendent of schools, who was an advocate of vaccination, aided in securing from the school committee an order for the vaccination of all children before they again entered school.

Thus far, this case seems to me to be hardly worth reporting to a medical society. But perhaps, for you as for me, its chief interest may center about the lessons which it taught me—or which I learned in connection with it—concerning vaccination.

Note this peculiar circumstance: that of the four children who were vaccinated at the same time, three escaped all symptoms of variola, while the fourth suffered from it in an unmodified form. Note also that his vaccine sore was going through the same regular stages as were the others, until the appearance of the first symptoms of variola, when its progress was at once stopped, and it promptly got better, not taking the regular course of recovery, as did the others.

Query 1. Where did Mr. Snow contract the disease, and why did he have only a mild case of varioloid?

Query 2. Why did Fred Snow have small pox unmodified by vaccination, while his sisters escaped the disease entirely?

Query 3. What may be expected as the effect of vaccination when performed after exposure to small pox?

I puzzled a good deal over these questions, especially the last two, but was finally able to settle them to my own reasonable satisfaction. Mr. Snow was the keeper of the town tramp-house, which is situated nearly opposite his home. After he was taken sick it was remembered that some days before—I am unable to state the exact day—when he let out the tramps, it was noticed that one of them was badly broken out over the face, and as he passed the house, one of the girls called attention to the fact, and laughingly remarked "perhaps he has got the small pox." It was about this time that a tramp was found in Worcester having small pox, and was quarantined. All signs point to the probability that the two cases were the same, and that this was the source of the contagion in Mr. Snow's case. Forty-two years before, in childhood, he had been vaccinated; and over all these long years the protective power of vaccination was manifested, not indeed as a perfect preventive, but to a sufficient extent to save all serious symptoms in his case.

In this connection I may say that I encountered a very common belief on the part of the laity, that vaccination was only a preventive

of unmodified small pox, but not in any sense of varioloid. My answer to this was, that recent and successful vaccination is as sure a preventive of all forms of small pox, as is a previous attack of the disease; but that after a variable time, its protective power begins to be exhausted and the subject becomes liable to the modified form known as varioloid; thus rendering re-vaccination necessary; while second attacks of genuine variola do sometimes occur.

As for Fred Snow, after his father was taken ill he helped to take care of the tramps, and in all likelihood contracted the disease in the tramp-house, some days before the appearance of the eruption on his father. At least, it is only thus that I can explain his illness, coming on seven days after the appearance of the eruption in his father's case, whilst all the girls escaped, notwithstanding the fact that they were about their father much more than was Fred, and would naturally have absorbed the poison earlier. However, all the signs confirm me in the belief that the contagion is very slight before the appearance of the eruption.

But why, even if this supposition be true, did Fred's vaccination fail to have any modifying influence whatever, while in the other cases it was a perfect preventive? This question puzzled me for a long time. I studied many books and questioned many physicians—enough to convince me that I was not alone in my lack of knowledge on the subject—before I arrived at a satisfactory solution. I finally found it, however, in an extract from Seaton's Handbook on Vaccination, which is so reasonable in its statement and so fully explains all the facts in this case, that I cannot do better than to quote it entire.

"It does not follow because a person has been exposed to the infection of small pox, that he has therefore received the infection, and the vaccination may be in time to prevent the disease altogether; but supposing that before the vaccination is performed, the variolous infection has actually been taken up by the system (of which, of course, during the stage of incubation we can know nothing), unless the infection have so far got the start that the small pox symptoms appear before the vaccination reaches the stage of developed areola, the vaccine process will either prevent or modify the small pox eruption; if, on the other hand, the variola manifests itself before the vaccination has reached its protective stage, its stage of areola, the vaccination, though it will have done no good, will most certainly have done no harm—the small pox will simply go on as though it had never been performed. Now, whether the vaccination shall reach the stage of areola or not before the small pox appears, depends entirely on the length of time which had elapsed between the reception, by the system, of the variolous poison and the performance of the vaccination. As the incubative stage of small pox is twelve days, while the time required to bring vaccination to the stage of areola is only nine days, vaccination performed any time within the first three days will reach areola soon enough to produce its protective power; after this, whatever the local success of the vaccination, no constitutional protection will be imparted.

"If there were any means of ascertaining whether a person exposed to small pox infection had actually received it, and if so, at what moment this had taken place, we should know exactly whether it were worth while to vaccinate or not; but as no such means exist, the obvious rule of practice is to assume that the poison has not been inhaled, or has only recently been inhaled, and to give our patient a chance. But no prudent practitioner, vaccinating under these circumstances, will commit himself as to the protective value of his vaccination, until he has seen the areola completely formed.

"For want of knowledge or of consideration of these simple facts, practitioners have repeatedly compromised their credit, many lives have been lost which should have been saved,

and erroneous entries are daily made in our death-registers. Seeing perfect vaccine vesicles on the eighth day, the practitioner who was not aware of the necessity of waiting for areola, has promised safety, and been cruelly disappointed; his credit and the credit of vaccination have equally suffered."

SMALL POX, WITH REPORT OF CASES IN FRANKLIN, MASS.

By Chas. B. Hussey, M. D., Franklin, Mass.

I shall endeavor to give you only a rough outline, in this paper, of the small pox situation as it has presented itself to us in Franklin. Franklin has had, in all, 15 cases; the majority being in light form, although three or four of the cases have been quite severe. The first case came under my own observation last July, and as it was a very typical case from start to finish, a short description of it may not come amiss.

The patient was a young man employed on a milk farm about one mile from the center of the town; who had never been vaccinated. On July 4th he visited Woonsocket, it being the only time he had been away from town in eleven months. On the ninth day thereafter he had a chill followed by fever, vomiting and intense pain in the lumbar region. The temperature ranged from 103° to 104° and he constantly complained of intense pain in the back until the morning of the fourth day of the disease, when the eruption began to make its appearance, at which time all pain left him and the temperature subsided to 100°, remaining at that point until the ninth day. I first noticed the eruption about the face and upon the soft palate, but on the following morning it was well defined over the whole body. I was certain that I had a case of small pox to deal with but never having seen a case, I did not care to shoulder the responsibility and accordingly summoned Dr. Morse of the State Board of Health, who came out the following day. At this time umbilication had commenced and the characteristic odor was well pronounced. Dr. Morse pronounced it a perfectly developed case and gave directions for quarantine. A temporary building was immediately erected in the pasture at the town farm and a tent was erected for the accommodation of the nurse and myself, and I was quarantined with my patient for two weeks, thus affording me an opportunity to watch the development of the disease very closely. On the ninth day, at the development of the pustular stage, the patient had another chill, the temperature rose to 104½°, remaining in that vicinity for three days, during which time there was wild delirium. On the twelfth or thirteenth day, I do not quite recall which, the fever entirely subsided and the pustules began to dry up, forming the characteristic scales. I noticed in this case that the papules and vesicles constantly increased in number up to the formation of the pustules. During the pustular stage the body was thickly covered from head to foot with pustules about the size of a split bean, each one surrounded by a narrow red border where the inflammation extended into the surrounding skin, and with spaces of not more than 1-16 to 1-8 of an inch between them. On the forehead and about the angles of the jaw they were confluent. My treatment during the period between the appearance of the eruption and the formation of the pustules, was entirely supportive, consisting of broths, eggs and milk and brandy, feeding every two hours. During the secondary fever I added quinine and acetanilid and coated the face and other parts where there was much itching, with an ointment consisting of resorcin, eucalyptol, acetate of aluminum and oxide of zinc, combined with a petroleum and lanoline base. The patient's body is considerably "pitted" in places, especially the back where the pustules were ruptured by turning in bed, but the face is quite clear. The nurse and myself kept in the open air all that was possible and made plentiful use of corrosive sublimate solution after handling the patient. As soon as the

* Read at a meeting of the Thurber Medical Association, Milford, Mass., April 3, 1902.

scales commenced to fall I had the patient take daily baths in 1 to 1000 bichloride solution, which I think hastened the desquamation and lessened the chances of contagion.

All persons who had been exposed to the contagion were immediately vaccinated upon the first suspicion of small pox and no more cases developed from this one.

During the past ten weeks, eleven cases have occurred in town proper and three in Unionville. All the town cases have been dependent upon either the town or State for their expenses and have been isolated at an unused school-house at South Franklin, which has afforded very comfortable quarters for them. The Unionville cases have paid their own quarantine expenses and, as the dwellings are well isolated, have been allowed to remain in their own homes.

All these cases except four have been in a light or modified form. The exceptions have been in one child four years of age in whom the disease was confluent, and a brother of this child twenty months old in whom the disease was developed upon an untreated eczema of a year's standing. Both of these cases were at the detention hospital. The other two exceptions occurred at Unionville and were under the treatment of Dr. A. J. Gallison.

I believe that the spread of the disease is largely due to these light cases which are not severe enough to confine the patient to the house and hence may not be recognized unless they come to the notice of a physician. One victim of the disease came to my office with some children to be vaccinated and when I told him that he had small pox, he replied, he thought he did. It is also in these modified cases that the greatest difficulty in diagnosis occurs, but I believe that the observance of a few simple points which must have presented themselves to anyone who has handled cases of the disease, will prevent any error. First, the hard, shot-like feel of the papules and their appearance upon the palms of the hands and soles of the feet. Even in the most discrete case you will usually find three or four along the ball of the thumb. Later, the umbilication of the vesicle which occurs with great uniformity, while in a severe case of varicella only an occasional vesicle shows signs of umbilication. In the pustular stage, even in the very mild cases, the patient will complain of quite severe pain and soreness of the hands and feet and a feeling of distension of those parts.

No new cases have developed during the past fortnight and unless some new centre of contagion is opened up, which is improbable, as general vaccination has been ordered and is being carried forward, we feel that we are practically free from the disease for the present at least.

Before closing I would like to give a few statistics which will undoubtedly be of interest as showing the value of compulsory vaccination. England has suffered more than any other European country during the present epidemic on account of the "conscientious scruple clause" which was added to the vaccination law in that country in 1895. In Germany small pox in its typical form is almost an unknown disease; vaccination being obligatory and the law consistently enforced. In Germany in 1871, with a population of 50,000,000, there were 143,000 deaths from small pox. In 1873 vaccination was made compulsory and since that time the death rate has steadily decreased until in 1898 there were only 116 deaths from this disease in the whole of Germany.

According to International Journal of Surgery, the most effective treatment for erysipelas of the face consists in the constant application of ichthyol dressing. But however limited the disease, and however well the patient appears to be doing, the surgeon must be constantly on the watch for the appearance of cerebral complications, whose onset may be very rapid and the termination of which is often fatal. Hence always forbear to give a good prognosis in these cases until the patient has practically recovered.—*Am. Jour. of Surg. and Gynecology.*

NEWS, NOTES AND ANNOUNCEMENTS.

School for Vermont Health Officers.—The State Board of Health, composed of Drs. C. S. Caverly of Rutland, H. D. Holton of Brattleboro and T. R. Stiles of St. Johnsbury, met at the Van Ness House recently and appointed a date for the school for health officers and partially arranged a programme for the event. They inspected the laboratory and transacted considerable routine business.

The school will be held in this city, beginning Monday, July 7, and will continue through Tuesday, Wednesday and Thursday. Among the speakers will be Dr. Salmon, head of the bureau of Animal Industries at Washington, who will give a paper on "The Relation of Animal Diseases to Man."

Dr. H. Edwin Lewis of Burlington will give a paper upon "The British and American Congresses of Tuberculosis" and will also arrange and superintend an exhibit of pathological specimens of tuberculosis and other matters pertaining to the disease.

Dr. George Fox of New York will give a paper on small pox and other infectious diseases.

Dr. S. H. Woodbridge of the Polytechnic Institute of Boston will speak on "The Ventilation of Public and Private Buildings."

There will be a number of other papers but the authors and subjects have not yet been determined.

Recent Deaths.—Every month the list of living graduates of that famous old institution, Castleton Medical College, is growing smaller. Following are the most recent deaths:

John Kennington Leaning, M. D., Castleton (Vt.) Medical College, 1848, a prominent physician of Cooperstown, N. Y., died at his home in that place, April 4, after an illness of five days, from pneumonia, aged 78. Dr. Leaning had practiced medicine in Otsego County for 54 years.

William Wood, M. D., Castleton (Vt.) Medical College, 1852, a resident of Cairo, Ill., for half a century, died at his home in that city, April 5, aged 80.

Frederic Augustus Putnam, M. D., Castleton Medical College, Vt., 1837, who practiced for sixty years in New York City, but had resided at Sutton, Mass., for the past six years, died at his home in that place, March 27, aged 89.

John L. Eddy, M. D., Castleton (Vt.) Medical College, 1854, one of the most prominent physicians of Western New York, a veteran of the Civil War, and at one time president of the State Association of Railway Surgeons, died suddenly at his home in Olean, N. Y., April 5, aged 73.

Gastric Pain.—For many years Prof. Whitford has taught his classes to prescribe the bicarbonate of soda freely where there is persistent pain in the stomach, often depending upon gastric ulcer. Sir Lauder Brunton has recently advised that a teaspoonful of the bicarbonate of soda in a little lime water, to which the essence of pepperment has been added, gives a more speedy relief from pain from gastric ulcer than morphine. In many cases, by the neutralization of acid fluids present, do produce relief where morphine will not.—*Chicago Med. Times.*

The Burlington Clinical Society.—A regular monthly meeting of the Burlington Clinical Society was held at their rooms, 162 College St., Friday, March 28, 1902, at 8.30 P. M. The following programme was presented and enjoyed by all present:

Paretic Dementia, Dr. J. M. Clarke.
Tabes Dorsalis, Dr. C. A. Pease.
General discussion and report of cases.

Applaud us when we run, console us when we fall, cheer us when we recover, but let us pass on—for God's sake—let us pass on!—*Burke.*

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

H. EDWIN LEWIS, M. D., *Editor.*

FRANK C. LEWIS, *Business Manager.*

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Burlington, Vt., April 25, 1902.

EDITORIALS.

RECIPROCITY IN STATE MEDICAL LICENSE. —It is interesting to note the consideration that is being given all over the country to the question of reciprocity in State licenses to practice medicine. The medical press have long been agitating the matter and it is quite generally conceded that some arrangement is desirable, whereby privilege to practice medicine can be extended beyond the particular State in which the medical graduate obtains his license. But the most sanguine must admit that the day is far distant when the various State laws will be sufficiently uniform to justify any complete basis of reciprocity. A more wide spread discussion of the question is therefore desirable in medical societies and elsewhere, and in this way a satisfactory solution of the question is bound to be reached at an earlier date.

Many plans have been suggested, but it seems to us that the one most feasible and the one that will accomplish the most for the medical profession, is that which advises the establishment of a National Licensing Board. State lines should never have been drawn in regard to medical practice, and if the same amount of energy expended in the effort and struggle for State laws had been directed toward National legislation, the medical profession of the United States would stand as a far more important body than it does at present or its size and importance deserves. The great burning need of the medical profession to-day is not more laws, but better organization.

Here we are a body of men 140,000 strong, ascribing to ourselves higher intelligence and learning than the ordinary run of mortals, and yet it is safe to say that no other distinct class has less collective influence in public affairs than the medical profession. The only reason for this is our woful lack of organization and we can never hope to accomplish anything in the way of National influence or standing, until we are more unanimous in regard to the fundamental principles of medical science, and the common interests of the profession as a whole. The American Medical Association is making a valiant struggle to place the medical profession of the United States on a proper plane of usefulness and influence. Certainly the Association stands for the highest and best of medical ideas, but even yet, noble organization as it is, it can only claim numerically a small proportion of American medical men. An institution as broad and useful as the American Medical Association ought to number 75,000 members at least, and that it does not can only be laid to the woful lack of interest which so many medical men show toward medical advancement and organization.

We believe if a National board for the licensing of medical men is ever established,that a great step will be taken in the up-lifting of the medical profession. Greater uniformity in medical practice will be the logical result, and in view of the many aspersions that have been cast on American medicine abroad, this is a consummation devoutly to be wished for. Distinct lines can be drawn between the competent and incompetent, the real and the pretender, and the truly progressive competent members of the medical profession will not have to suffer by being classed with "doctors"

of osteopathy, christian science, magnetism, etc. Abroad we are considered from a National standpoint and the variation of our State laws is so little understood as the cause of our present heterogeneity in medical qualifications, that the whole suffers by comparison with the less. All this can be changed by the profession awakening to the salient fact that in union only is there strength.

Moral Perverts and the Community.—What should be the attitude of a community toward a self-confessed moral pervert? This question arises in connection with a recent scandal in Essex Junction. The principal of the High School, a beast by the name of Dalrymple was exposed as a party to unnatural acts with certain of his boy scholars. The facts of the case were brought to the attention of the School Trustees who immediately conducted an investigation, resulting in the confession of the culprit. Instead of giving him his just deserts and exposing him for the low, filthy cur that he was, *they asked for his resignation,* and report has it that he was gracious enough to tender it to them! If this is not about the limit for farcical procedures, we will admit our inability to judge.

If this miserable specimen of human depravity had directed his attention to the girls of his school, every father and brother in the town would have taken revenge on him and he would have been lucky to escape with his life. But since it was only the boys he polluted, he is simply asked to resign! Now, it is about time to change a policy of this kind, which is unquestionably responsible for much of the rottenness of the same character that exists more or less in every community. When a person is proven to be so diseased morally, as Dalrymple was, proper steps ought to be taken to cut short their career. Casting them out to prey on the youngof some other community is a gross injury to society. Furthermore it should not be forgotten that the moral character of our boys is just as valuable and worthy of protection as the virtue of our girls,—for they rise or fall together.

Scientific Enterprise.—The laudable work which some of our large drug firms are doing along the line of science and research is worthy of all praise. They are not content to stand still and with enormous capital behind them, there is no limit to their possibilities.

The biological laboratories of the H. K. Mulford Company at Glenolden, Pa., have made another step forward in the progress of work in Serum-Organotherapy, and in the investigation of infectious and contagious diseases, by securing the services of Joseph J. Kinyoun, M. D., Ph. D., late Surgeon of the Marine Hospital Service and Director of the Hygienic Laboratory of the Marine Hospital Service at Washington.

Dr. Kinyoun is widely and favorably known at home and abroad as a sanitarian and scientific investigator, and has served the government on numerous occasions as special delegate to International Medical Congresses. He is devoted to original research in bacteriology and in the interests of the government he has visited the various bacteriological laboratories in this country and in all Europe and Japan. Dr. Kinyoun received special instruction from Professors Kock, Behring, Pasteur and Roux of Paris and Berlin, as representative of the government, thus acquainting himself with the progress made in serum-organotherapy and in the investigation of infectious diseases. He is peculiarly fitted for the directorship he now assumes and under his administration there will be still further advances made in the field of biology as applied to medicine.

EDITORIAL NOTES AND CLIPPINGS.

Two Kinds of Friendship.—On the broad pathway of life there are many kinds of men. Some make good friends, but many who assume the guise of friendship are worse than enemies. Some few facts were recently

brought to our attention which show the kinds of friendship occasionally demonstrated by medical men. A certain prominent physician in a nearby town was taken very ill. His sickness was recognized as serious but not necessarily fatal and so effort was made to temporarily fill the positions of health officer and town physician, both of which he held. The only colleague who had time to assume the duties of one position positively refused to do so unless given the appointment permanently! No considerations of friendship or kindness could move him and though much beholden to the man he was injuring, he was finally able to get what he wanted by taking advantage of circumstances. He gave a beautiful demonstration of one kind of friendship.

The other position, though not so desirable and more arduous, was assumed by a far busier physician who willingly agreed that it was to be relinquished as soon as his afflicted colleague was well. When the question arose as to payment by the town for the work done by this physician, his reply was something like this, "I assumed the position as an accommodation and an act of kindness to Dr. — ——, and not for any pleasure or profit to myself. He holds the position and any amount that is due for the work discharged should go to him. Kindly take it over to his wife." In other words he showed himself an honest, kindly man who did as he would like to be done by, and gave an exhibition of friendship quite different from the kind quoted first.

The "white" man (who does not know that his act is generally known by his friends), is Dr. J. W. Sheehan of Winooski.

The other man's name we are trying to forget, so we will not mention it.

Substitution Extraordinary.—Substitution as generally understood is one of the abominable evils against which physicians have to be on their guard. The only way to get rid of this evil is for a physician to insist on having his prescriptions filled by a reliable druggist, and then watch this druggist occasionally to see that he does not fall from grace. The reputation of the physician, the health, and sometimes life, of the patient depends on the correct filling of prescriptions. While we believe that very few druggists are guilty of substitution, some of them are. We refer now to the substitution of "something just as good" for a similar preparation and which the druggist may believe will answer the purpose, especially if it is cheaper. But the druggist who places his "belief" above the written instructions of the physician will be dishonest in other ways and should be treated accordingly. Our attention, however, has been called to another form of substitution that is more dangerous, more vicious, and more criminal than that referred to above, and one that is more difficult to guard against. We have received a circular letter from the Farbenfabriken of Eberfeld Conpany, in which they record their experience in ferreting out a despicable adulteration of their products. The facts in the case were brought out in a lawsuit and revealed that certain men were actively engaged in counterfeiting labels and boxes and filling them with all sorts of material utterly unlike the genuine and then selling them to druggists as the real article. While we believe that this form of adulteration is unique to this particular instance, it is well that we recognize the possibility of such an occurrence in the future. It is further quite probable that this form of fraud would be worked only on unscrupulous druggists who desire to buy the cheapest without regard to quality.—Editorial—*Journal of the American Medical Association,* January 4, 1902.

MEDICAL ABSTRACTS.

Finger Amputations.—The methods of performing finger amputations are noticed by Deaver in *Phila. Med. Jour.,* March 22, 1902, who describes the method as follows: "When amputating near the distal joint the operation

should save, if possible, the base of the distal phalanx as the long flexor and extensor tendons are attached at this joint and their function is thereby preserved. In amputating at any point above the distal joint, the cut ends of the tendons should be stitched either to the periosteum or to the flap, thus preserving their function. Senn says, in amputating a finger below its base, the extensor tendon should be sutured to the flexor tendon over the articular end or sawn surface of the bone. This will prevent undue retraction of the flap and furnish the cut ends of the tendons with a permanent point of anchorage. The teaching has been to amputate the middle and ring fingers at the metacarpophalangeal articulation. The surgeon should save as much of these two fingers as possible, for by the above method of fastening the tendons the stumps of these fingers becomes useful; the inter-ossei muscles, too, are supposed to play a part in flexing these fingers. It is advisable to saw through the bone, instead of cutting with the forceps, as the latter procedure is liable to splinter the bone. Before sawing through the bone the periosteum should be deflected in the form of a cuff; after the bone is divided the periosteum should be pulled down and sutured with fine catgut over the end of the bone. It is unnecessary to round off the edges of the bone as these are readily absorbed. The cut nerves should be drawn down as far as possible and cut high; this will prevent the nerve from being caught in the scar and causing the condition known as painful stump. The arteries should be left as long as possible and by twisting them sufficiently ligation may not be necessary. If an elastic constrictor has been used, this should be removed suddenly, the old notion that the elastic tube should be removed slowly, thus being apt to cause hemorrhage, is erroneous. Before closing the wound it should be thoroughly washed with hot saline solution and should be perfectly dry. Drainage should usually be introduced either in the shape of a small tube or strip of gauze. The cut edges should be accurately approximated and stitched with silkworm gut; use as few stitches as are necessary to bring the flaps into apposition. By inserting too many stitches the part becomes constricted, the blood supply shut off, drainage is prevented and the tension causes pain. In the perfect stump the flaps are freely movable over the end of the bone. Always immobilize the stump by placing the hand on a splint; this is very essential to secure absolute rest. If for any reason the stump should become infected, remove the stitches and make free longitudinal incisions into the stump, if there is any swelling. In disarticulating the fingers at the metacarpophalangeal joint, the lateral flap method is perhaps the best. This is done by making two separate incisions, beginning about three-quarters of an inch above the head of the metacarpal bone and extending around to meet on the palmar aspect of the base of the first phalanx. In case it is necessary to remove the metacarpal bone, this can be done by extending the incision just described, up the dorsum of the metacarpal to the carpometacarpal joint. The operator should make the knife hug the bone as closely as possible to avoid cutting the palmar arch or other structures in the palm. The surgeon should be extremely conservative in operating on the thumb, as this is the most important finger on the hand. It is advisable to try excision on the bones of the thumb before resorting to amputation."

BOOK NOTICES.

SYPHILIS. A SYMPOSIUM. Special Contributions by Drs. L. Duncan Bulkley, Follen Cabot, Louis A. Duhring, Profs. Fournier Eugene Fuller, E. B. Gleason, William S. Gottheil, Robt. H. Greene, Norman B. Gwyn, Urville Howitz, Edward L. Reys, G. Frank Lydston, D. J. McCarthy, Thomas G. Morton, Boardman Reid, A. Robin and J. D. Thomas. E. B. Treat & Co., 241 West 23d St., N. Y. City. 1902.

This monograph contains practical special contributions from each of the following

syphilographers: L. Duncan Bulkley, Follen Cabot, Louis A. Duhring, Prof. Fournier, Eugene Fuller, E. B. Gleason, Wm. S. Gottheil, Robt. H. Greene, Norman B. Gwyn, Orville Horwitz, Edward L. Keyes, G. Frank Lydston, D. J. McCarthy, Thomas G. Morton, Boardman Reed, A. Robin and J. D. Thomas.

It represents the most modern ideas on an important subject and should be in the hands of every advanced medical man.

COMPEND OF GENERAL PATHOLOGY.—By Alfred Edward Thayer, M. D., Assistant Instructor in Gross Pathology, Cornell Medical College; Pathologist to the City Hospital. Price, 80 cents, net. Philadelphia: P. Blakiston's Son & Co., 1012 Walnut street. 1902.

An eminently practical little manual of pathology well fitted for student or advanced use. It is distinctly modern and arranged in comprehensive form. The illustrations are well chosen and sufficiently numerous to elucidate the text. Its price is so reasonable that it should be in every practitioner's possession.

NEWER REMEDIES.

TREATMENT OF AMENORRHEA AND DYSMENORRHEA.*

By F. Levasseur, M. D., N. Y. City.

It is not my purpose to give here the treatment of all the varieties of these affections in detail. I will confine myself to the enumeration of the various procedures employed, and will dwell particularly on the treatment employed by me in a class of cases frequently met with in general medical practice.

The treatment of organic amenorrhea is chiefly surgical or mechano-gynecologic. In many cases, such as those in which the ovaries are absent, even surgery will accomplish nothing so far as restoration of the menstrual function is concerned. In cases of rudimentary ovaries various methods of stimulating the dormant activity of these organs have been employed with more or less success. Among them are electricity, ovarian extract, and sexual activity in marriage; massage, gymnastic exercises, change of climate, passing of uterine sounds and stems, and methods calculated to increase ovarian and uterine congestion, such as hot vaginal douches, foot baths and sitz baths, scarification, and the application of leeches to the cervix.

In functional and in constitutional amenorrhea the treatment consists in avoidance or removal of the cause and in the administration of emmenagogues. Of these I shall speak in connection with my cases.

In dysmenorrhea, if dependent on organic causes, the appropriate surgical or mechanical procedure must be resorted to. In desperate cases castration has been deemed necessary. In purely functional cases the two indications are the relief of the pain and the administration of emmenagogues to relieve the uterine congestion. The relief of pain is accomplished by one or another of the analgesic drugs. Morphine is, of course, to be avoided so far as possible. In addition, the use of hot packs about the pelvis and other means of applying heat are also very popular in the acute paroxysms of pain which characterize dysmenorrhea.

The list of emmenagogues is very long, but many of them are unsuited for use in amenorrhea or dysmenorrhea because of their inefficiency or because of their harmful effects. After trying successively manganese dioxide, potassium permanganate, ergot, aloes, oil of savin, apiol, and numerous other drugs of this class, the writer became convinced that the four last-named drugs, particularly apiol, may be considered as the most efficient and, in proper doses, the least harmful of their class.

Apiol is perhaps not so well known as it deserves to be. It has gained considerable popularity among French and English physicians, and has been introduced into this country some years ago. At first it was recommended for malaria, as a substitute for quinine, but later its emmenagogue virtues became known. It is the active principle of apium petroselinum, L.,

* From International Journal of Surgery.

or of petroselinum sativum, and was first isolated by Joret and Homolle in 1855. The apiol of the market is usually full of resinous impurities and, therefore, not suitable for administration. Indeed, the many failures to secure the emmenagogue action of apiol which physicians in this country heretofore experienced were chiefly due to the fact that the apiol usually sold as such was in reality a mixture of impure principles obtained from parsley by a simple process of extraction. In the cases reported here I employed the preparation called Ergoapiol (Smith), which contains a combination of pure apiol, ergot, oil of savin, and aloin in capsules. The histories of these cases are briefly given here. I will say in general that in all these cases emmenagogues were indicated and organic changes in the genital system excluded by examination. In addition to the cases reported below I have used Ergoapiol (Smith) in eighty others with results similar to those described here:

Case 1. Miss C. R., aged 15 years, menstruated for the first time five months ago, and only once since has had any indicating pains, and these without any flow during the month following the first menstruation. After treating her with iron, arsenic, etc., including douches and hip baths, without any apparent effect, I tried the Ergoapiol (Smith), giving her one capsule four times a day. On the fourth day I found that menstruation had been established, a slight pain remained, which disappeared after a warm hip bath, when the entire function became normal.

Case 2. Miss E. M. (nurse), aged 27, unmarried, suffered greatly at the menstrual period. I had used in her case many of the preparations recommended for dysmenorrhea, with poor success, and she had become convinced that only large doses of morphine with inhalations of chloroform, which she had been employing for some time, could give her relief. I prescribed two capsules four times a day for two days, and one capsule four times a day during menstruation. The periods now occur without the slightest discomfort.

Case 3. Mrs. D. S., aged 27, family history good, came for treatment October 10th; she had not menstruated for three months, no pregnancy existing. Diagnosis, nervous amenorrhea. Treatment was begun with two capsules four times a day for three days, then continued with one capsule three times a day. On the fifth day menstruation began slightly, and two capsules were administered three times daily until the sixth day, when the function was well established. In the month of November, two days previous to the menstrual period, one capsule was given as a precaution, three times a day for two days, and followed by normal menstruation.

Case 4. Mrs. H. S., aged 32, married twelve years, suffered every month with dysmenorrhea, and gave history of scanty menstruation since birth of her child, three years ago. I prescribed one capsule every four hours for three days before her period, and continued with one capsule three times a day during menstruation, which passed with comparative ease with a normal flow. A month later the patient repeated the previous treatment with the same good result.

Case 5. Miss A. T., aged 25. Dysmenorrhea with very offensive discharge. She was suffering with severe pains before and during menstruation. One capsule was given four times a day just previous to the expected period. The menses appeared without pain and with comparatively little odor, and menstruation became more nearly normal than it had been for several months.

Case 6. Mrs. N. P., aged 24, multipara, had not menstruated since confinement, a period of twenty-two months. She had tried various emmenagogues, but without result. After taking two capsules three times a day for a few days, menstruation was re-established in a perfectly normal manner.

Case 7. Miss O. R., aged 18, single, had been treated for syphilis for past six months, during which time she had had severe pains with scanty flow during her monthly periods. Her physician had prescribed various remedies, but without success. When she came to me she had passed her menstrual period for five days and had pain and fever associated with nausea. I prescribed Ergoapiol (Smith), directing her to begin at once with two capsules four times a day, and in order to avoid further stomach disturbance I ordered a glass of milk with the capsules. On the third day the menses appeared without pain and almost normal in amount.

Case 8. Miss F. R., aged 28, had always suffered with severe backache and pains in the abdomen for two or three days before and during menstruation, which usually lasted four to five days. Her health in every other respect seemed perfect. Patient had been treated

without success with usual remedies in such cases, including the "green apiol." The cervix was also dilated on two occasions without relief. I directed her to begin two days before the expected period with one capsule four times a day (two capsules three times a day during the first twenty-four hours). The menses appeared on the third day without pain, and she continued to take one capsule three times a day during the remainder of the period, which closed on the second day. During the following period the patient repeated the treatment of the previous month, with more marked relief.

Case 9. Mrs. E. B., aged 29, married four years, no children, had suffered every month with dysmenorrhea and a somewhat fetid discharge. Her agony was so intense that she was obliged to remain in bed for about two days at each period, and had acquired the habit of taking large doses of paregoric, Hoffmann's anodyne, and viburnum extract with very little relief. During one of these attacks I was called in, and after quieting her with ¼ grain of morphine, hypodermatically, I prescribed two capsules four times a day until menstruation had ceased. On the following day I found my patient more comfortable, having only a slight pain, and on the third day I found her quite well. She reported that during the last two days of her menstruation she had been better than during any menstrual period within the last four years.

Case 10. Mrs. E., aged 20, married six months, complained of scanty and retarded menstruation. She had always been more or less irregular and had suffered with considerable dysmenorrhea. At her last two periods, under the administration of one capsule four times a day, the menses appeared regularly without any distress.

Case 11. Mrs. H. J., aged 22, married two years, had been troubled with menstrual irregularity since her employment in a department store four years previous to her marriage. She was more regular during the few periods following confinement, but later her menses became more irregular and painful than at any time before. Two months ago she came to me with suppressed menses, the result of exposure and shock received through the upsetting of a sailboat. I made an examination, but found no signs of pregnancy, and directed her to take two capsules Ergoapiol (Smith) four times a day until some indication of a return of the menses. I told her to continue with one capsule three times a day until menstruation had ceased. She reported to me on the fifth day that the flow had reappeared in abundance and without pain, saying that she felt in unusually good health. I instructed her to take one capsule three times a day two days before the next period, and to continue in the same way, if menstruation appeared, until it ceased. She has since reported that the capsules brought about the same result as in the first month.

A Systemic Alterative Effect.—The following from *Gaillard's Medical Journal,* by Dr. A. H. Ashley, of Boston, Mass., will interest our readers because of the original way in which he expresses his pronounced admiration for something tried, trusted and not found wanting. The letter was written to our friends, The Antikamnia Chemical Company, and reads as follows:

Gentlemen:—Your various combination tablets, as well as antikamnia tablets have been used by me for a number of years, and I can only say that they have uniformly given me the best results. But, my dear sirs, why have you waited so long to give us the very best combination of them all? I, of course, allude to your "laxative antikamnia & quinine tablets."

If there is anything known to the medical profession which will take their place in that class of diseases, where one wishes to relieve pain, control the temperature and at the same time produce, by laxation, a systemic alterative effect, it has not been my good fortune to find it. In those cases of severe neuralgia, and particularly in ovarian and menstrual pain, where morphine was our only hope (and where, after its administration, we had indigestion, bowels bound up, nausea, habit, etc.), you have in Laxative Antikamnia & Quinine Tablets a remedy which will, my experience has taught me, replace morphine and meet all requirements.

I am slow to be carried away by enthusiasm for any drug or combination of drugs, but I freely and voluntarily confess that in these tablets you have given to the profession a remedy so effective and reliable in its action that it

offers good excuse (or a mitigating circumstance anyhow) for a little effusion from one who, as a general thing, is not given to gushing.

With my best wishes for your future and many thanks for your elegant preparations, I am sincerely yours,

A. H. Ashley, M. D.

Acute Metritis resulting many times from exposure to cold during menstruation or from gonorrheal infection usually manifests itself by a chill, more or less severe, with pains in the lumbar or hypograstic region.

The most satisfactory treatment for this condition is rest in bed with an ice coil or bag on the abdomen over the uterus followed by thorough flushing of the vagina with hot water in which has been dissolved Micajah's Medicated Uterine Wafers (one to the quart). After the acute stage has subsided a Micajah Wafer inserted into the vaginal canal up to the cervix will exert the antiseptic astringent action so essential in these cases.

Sanmetto in Gonorrhea, Cystitis, Prostatitis, Irritable Bladder, Incontinence of Urine, and in Sexual Neurasthenia and Pre-Senility.—I have prescribed Sanmetto for the past six years, and find it quite agreeable to the patients, being very pleasant to take and of great utility in the treatment of a large number of cases frequently met with in general practice. It has given me uniformly good results in all stages of gonorrhea, cystitis, prostatitis, irritable bladder and incontinence of urine. I have also found it of great value in sexual neurasthenia, and much more satisfactory as an aphrodisiac than any drug that I have employed during my twenty-six years of practice.

Wm. Parsons, M. S.

Chicago, Ill.

Appendicitis: With Special Reference to Diagnosis and Treatment.—W. H. Mitchell, in *Therapeutic Gazette*, in concluding an article emphisizes these salient points:

1. It seems fairly clear that appendicitis should be usually treated as a medical disease, unless suppuration, gangrene, or perforation occur.

2. We are never justified in advising an operation while the appendix is inflamed, just to prevent complications.

3. If accurate diagnosis and skilful medical treatment were applied in every case, these complications would be infrequent and the death-rate greatly diminished.

4. In recurrent appendicitis it is our duty to advise removal of the appendix between attacks.

5. Imagine yourself in your patient's place, and treat him as you would wish to be treated yourself.—*Charlotte Med. Jour.*

Hysteria simulating unconsciousness in a woman may be aborted by the surgeon taking up a pair of scissors, and regretfully announcing that he will have to cut all the patient's hair off, in order to make applications to her head. It is doubtful whether this bluff has ever been known to fail.—*Alkaloidal Clinic.*

Golden Rules of Obstetric Practice.—When abortion is inevitable, plug the vagina with strips of gauze or some clean, soft material, and wait six or eight hours. You will often find the ovum in the vagina on removing the gauze. If not, plug again and wait.

If any part of the ovum or decidua remains in the uterus, clean it out at once with the finger or curette, not hesitating to give an anesthetic if any difficulty is met with.

If there is a rise in pulse-rate and temperature, and the vaginal secretion is foul, give an anesthetic, dilate the cervix, empty the uterus, scrape it clean, no matter what stage the process of abortion has reached.

In other words, use artificial dilatation, followed by emptying and cleaning out the uterus in threatened incomplete and complete abor-

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ORIGINAL ARTICLES

PREPARATION OF PATIENTS FOR AND THEIR TREATMENT AFTER LAPAROTOMY.*

By Frederick Holme Wiggin, M. D., New York City.

Physicians, whether they operate themselves or not, are so frequently called upon to play an important part in the care of patients who are obliged, for one reason or another, to undergo an abdominal section, that a discussion of the subject seems timely. It is the writer's belief, founded upon considerable experience, that the patient's welfare depends, not only upon the technic of the operation itself being properly carried out, but also upon the successful management of many so-called minor and therefore often neglected details, both before and after the performance of the operation, and this must be his excuse, if one is needed, for the minuteness with which the detail of routine work has been gone into.

PREPARATION OF THE PATIENT.

When the condition for which the operation is to be undertaken is chronic, and all the time desired can be had for the preparation of the patient for the ordeal which he is to undergo, much can be done which will not only diminish the risk about to be incurred by him, but which will ultimately hasten convalescence. In such a case it is for the patient's welfare that the hospital where the operation is to be performed should be reached, or the trained nurse employed if the patient is to remain at home, at least one week prior to the date fixed upon for the operation. This allows the individual to become accustomed to the attendants or the environment, which is of undoubted importance, as it tends to lessen the dread and nervous tension, both of which are great in such a crisis, even under the best of circumstances. During this week the sufferer should be encouraged to spend the greater part of the time in bed, for the purpose of getting thoroughly rested. Patients too often come under operations physically exhausted. During this period, massage may be employed to advantage in lieu of physical exertions, as it improves the circulation, promotes digestion and the general bodily welfare. So far as it is compatible with a healthy mental condition, visitors and friends should be excluded. A daily record of the patient's bodily temperature, pulse, and respirations should be kept. An examination of the heart and lungs and a final analysis of the urine should be made at this time. As it is of great importance that the intestinal canal be thoroughly collapsed at the time of operation, careful attention should be paid to unloading and emptying the bowels, as well as to getting the digestive organs in good working order. This is best accomplished, in the writer's experience, by giving early in this week of preparation several small doses of calomel and soda, daily for three days, these followed each morning by a saline, and this in turn, on each of the three succeeding mornings, by an enema of from two to four quarts of saline solution. The rectum should be finally washed out with a pint of the same solution, six hours before the performance of the operation. The large enema just alluded to is best given with the patient lying in the dorsal position with his hips elevated and his shoulders and head depressed, a fountain syringe being used for the

* Read at the 88th annual meeting of the Vermont State Medical Society.

purpose, the reservoir of which should not be elevated more than two feet above the patient's body.

The fluid should have a temperature of 110 degrees F. and should be introduced into the canal slowly, being allowed to flow for two minutes then intermitted for five minutes and again allowed to flow for two minutes, this process to be repeated till the patient complains of a feeling of distension or of intestinal colic, which does not pass away within the five minute interval. By perseverence in the manner above described, several quarts of saline can usually be introduced into the colon in the course of three-quarters of an hour, with but slight discomfort to the patient, who should be encouraged to retain the fluid for another fifteen minutes before it is allowed to escape.

The administration of these enemata should be supervised by the physician, as the nurse seldom knows how to accomplish the introduction of the desired quantity of fluid into the intestinal tract, or, if she has the knowledge and experience, she has not sufficient authority over the patient to effect the desired result. The writer has often been told by nurses intrusted with this duty that they have given the enema of four quarts, not as ordered, but in divided doses, thinking probably that as "twice two equals four" they have performed their duty in a satisfactory manner. It is this misunderstanding that so often causes the patient's bowels to act on the operating table, not only to the great discomfort of the surgeon and assistants, but frequently, when the operation is about the vagina, endangering the patient's life.

The patient's diet during this week of preparation should be of an easily digestible nature, and he should be encouraged to partake of liquids freely, for the purpose of restoring the normal quantity of fluids in the body. If needed, cardiac stimulants should also be given. Hot baths (110 F.) of ten minutes' duration should be given daily, not only for cleansing purposes, but to promote the secretions of the skin and kidneys. Special attention should be paid to the navel and pubic region, which should, if practicable, be shaved on the day previous to that fixed upon for the operation; otherwise is must be done after the patient has been placed under the anaesthetic. If the individual is a female, the time of the operation should be, when possible, arranged for a few days following the cessation of the menstrual flow and a vaginal douche should be given, consisting of a saturated solution of boric acid, and followed by one of formalin (one-half per cent) or of mercury bichloride (1 to 4,000). It is well during these days preceding the operation to give the patient a mild hypnotic every other night. The writer has found a combination of sulfonal and chloralamid to answer the purpose. This hypnotic should be given always on the last night of the period under consideration.

If, however, circumstances do not permit us to follow the plan of preparation just outlined, the best course to pursue, in the writer's opinion, is to give the patient the evening before the operation two compound cathartic pills and on the following morning at 6 a. m., an enema of four ounces of soapsuds, and two ounces of glycerine, to be followed by a second enema two hours later for a morning operation and six hours later for one to be performed in the afternoon.

The patient's skin covering the abdomen should be prepared for the surgeon by thoroughly cleansing it, applying a soap poultice for four hours over the site of the proposed incision, then replacing it by a compress moistened in a one per cent formalin solution. This compress is allowed to remain until the patient is placed on the operating table. These preparations can be made the evening before, if the operation is to be performed at an early hour in the morning; or in the morning, if an afternoon hour has been decided upon. It is wise to fix upon as early an hour of the day as practicable, as the patient in this case has less time in which to become exhausted from want

of food, or restless or nervous from the dread of what is to come. It is of great importance that once the hour has been determined there should be no postponement, as the writer has seen patients almost collapse under the extra nervous strain entailed by half an hour's delay.

If the operation is to be performed at an early hour (i. e., 8 a. m.) the patient should be given a peptonized milk punch at eleven o'clock the previous evening, and if he awakens at 5 or 6 a. m. another may be given, but nothing more. It has been the writer's experience that a small amount of stimulating and concentrated food, administered about two hours prior to the taking of the anaesthetic, diminishes the liability to heart failure, and also lessens the nausea and vomiting which so frequently follow the return to consciousness. If an afternoon hour has been decided upon, another peptonized milk punch may be given the patient at 11 a. m. If the case is of an acute character and an immediate operation is demanded, little more can be done than to cleanse the skin in the manner already described, and to douche out the vagina if the patient is a female. A stimulant should be administered if the pulse is feeble or if the patient is suffering from collapse due to intestinal perforation. In this condition, if the patient does not respond to the stimulants, the operation should not be performed, as it will prove of no avail. If on the other hand, the patient rallies, the operation should be done with as little delay as is practicable; but even in these cases it should not be forgotten that if we would have our work come to a successful issue we must have plenty of light, assistants, and facilities for intra-abdominal irrigation.

If the operation is to be performed in a private residence, a room with a north light should be preferably selected. Its furniture should be removed at least twenty-four hours before the room is to be used. After is has been thoroughly cleansed, the windows should be left wide open for two or three hours, then closed, and the woodwork wiped off with bichloride solution, 1 to 1,000. The floor should be dampened with a similar solution. A table twenty inches wide by thirty inches high, and varying in length according to circumstances will be needed, as well as several smaller tables or stands, a few wooden-bottom chairs, several large pitchers, four or five basins, several meat platters and a receptacle (a fish kettle) for sterilizing the surgeon's instruments. All these articles should be cleaned and washed off with bichloride solution before being placed in the operating room. The room should be closed after all the articles have been placed in it, and should remain so until needed. Several dozen towels, sterilized by boiling or by steaming in a sterilizer, and several gallons of cold and hot water, sterilized by boiling, complete the arrangements to be made before the arrival of the surgeon, who usually provides instruments, ligatures, suture materials, and dressings. For emergency operations it is best to make no attempt to clean the room, but the floor should be covered with a sheet wet with bichloride solution. This avoids vitiating the air of the room with dust —a thing greatly dreaded by the surgeon.

The patient should be so clad for the operation as to reduce to a minimum the bodily exposure. The clothing should consist of a warm undershirt, drawers and stockings—the last named often being made in one piece.

The anæsthetic should be administered to the patient before he is brought into the operating room. If the anæsthetic to be employed is ether, it is advisable to administer hypodermically one one-hundredth of a grain of atropine half an hour before the induction of the narcosis, as this tends to diminish bronchial secretion and materially lessens the amount of ether to be given. If, for the administration of the ether, a closed inhaler is used, of the Clover type, and the gauze contents are saturated with the fluid at the start the mouthpiece being rapidly brought down over the patient's nose and chin, so as to exclude the air,

the anæsthetic state will be quickly induced, and there will seldom be a stage of excitement. It is a fact that patients can be rendered unconscious and kept in this condition for an hour with only three ounces of ether, and for the second hour with only two additional ounces.

After the patient has been placed under the influence of the anæsthetic agent, and put on the operating table, on which sterilized blankets have been placed in such a manner as to admit of their being folded over the patient's chest and lower limbs, leaving only the abdomen exposed, the bichloride compress previously alluded to, is removed and the skin is finally scrubbed with hot water and tincture of green soap. The pubic and umbilical regions should receive special attention. This scrubbing is to be followed by irrigation with sterilized water, ether, and alcohol. If the person is a female, it should be the rule to cleanse the vagina in the same manner, after passing the catheter. Instead of scrubbing the tissues with a brush, it is better to use a piece of gauze, held in the jaws of a sponge-holder, as the brush tends to excoriate the tissues and thereby increases the danger of septic infection.

While the operation is progressing, the anæsthetizer, who should be an experienced physician, should watch the patient constantly and pay no attention to the operator. As soon as the reflexes have disappeared, he should raise the inhaler from the patient's face, to replace it as soon as they return. In this way the patient inhales the minimum amount of ether and carbonic-acid gas. As soon as the pulse increases twenty or thirty beats a minute, a stimulating hypodermic injection of strychnine should be administered and repeated as needed from time to time, until one-twelfth of a grain has been given. To this may be added one one-hundredth of a grain of nitroglycerin every fifteen minutes. If in spite of these stimulating injections, the pulse exceeds one hundred and fifty beats a minute, it is well to open either the right or left median cephalic vein and introduce into the circulation from one to two pints of saline solution at 120 degrees F. This solution should be made ready in advance. For giving such an injection a simple apparatus, consisting of a rubber tube with a funnel at one end and a blunt hollow needle at the other, is all that is requisite.

AFTER TREATMENT.

The operation having been completed the patient should be returned to his bed, being placed directly within the folds of a blanket and surrounded, if necessary, with hot water bags or bottles. Care should be taken lest they be overheated and so blister the still partially unconscious patient. This warning is given because it is not at all uncommon, when the matter is left entirely to the nurse, to have the patient receive one or more severe burns from this cause. When hot saline solution is allowed to remain in the abdominal cavity, the patient generally leaves the operating table in good condition, and with a warm, moist skin. If the patient's pulse is weak and rapid it is wise to raise the foot of the bed somewhat. There is, however, usually little shock unless there has been much loss of blood during the operation.

During the first twelve or eighteen hours following the operation it is usually best not to allow the patient anything by mouth except a little warm water from time to time. If ether has been administered intelligently in small quantities and in the manner previously described, there will generally be little or no vomiting or nausea. If the demand for fluids is urgent, which is seldom the case when the saline solution is left in the general cavity, it is probably due to gastric irritation, and can usually be successfully combatted by two or three large doses of salicylate of bismuth. The patient should during these early hours of convalescence be stimulated and nourished, if necessary, by means of enemata of saline solution, unless the operation has involved the breaking

up of extensive and firm adhesions in the pelvic cavity, in which case a weak place in the bowel may be ruptured and the enema and fæcal contents of the lower bowel be forced into the general peritoneal cavity. With the passing of these first 12 or 18 hours, if the patient is not suffering from nausea or vomiting, and the pulse rate is much as before the operation, a small quantity of equal parts of milk and lime water may be given from time to time, until four ounces have been taken. After this there should be an interval of two hours when four ounces more of peptonized milk may be given. The quantity of milk should gradually be increased and the interval lengthened, until the patient takes eight ounces or its equivalent every three hours, but once during the twenty-four hours the interval should be lengthened to six hours. The general tendency is to give too small quantities of nourishment at too frequent intervals, which fatigues the stomach and is apt to cause irritability of this organ, and engender a disgust for food. During the interval, if the patient desires more liquid, egg albumen and water (the whites of three eggs to a pint of water, to which a little salt has been added) may be allowed him frequently.

The patient should not be required to maintain any one position for any length of time, but may be moved from time to time, in accordance with his desires, first by the nurse and later by himself and this permission to change his position will prove a great source of comfort to him.

During the first forty-eight hours following the operation, if the patient is disturbed by reason of intestinal gas, great relief is often afforded by the introduction through the sphincter ani of a short rectal tube.

If this simple procedure proves inadequate, friction may be applied over and along the colon. This complication, however, will seldom arise if, during the week preceding the operation, proper attention is paid to clearing out the intestinal contents. If the patient continues to do well and retains nourishment, and the intestinal canal has been well emptied, no cathartic need be administered until the third or fourth day, when one-tenth of a grain of calomel and one grain of soda should be given every half hour for five hours. If the bowels do not act within three hours after all the calomel has been taken, a Seidlitz powder should be administered, and repeated after another interval of three hours. After the bowels have moved, if all has gone well, the pulse rate will be much as it was prior to the operation and by the evening of the fourth day the bodily temperature should be normal, in which case the patient may be rapidly allowed to resume ordinary diet. The dressings, if all goes well, should be allowed to remain ten days, when they should be removed and the subcuticular suture, if one is used, withdrawn, the site of the incision being first washed with hydrozone. After the removal of the suture just referred to, a thin coating of a solution of celloidine in ether and alcohol may be applied to the wound, the patient remaining in bed a few days longer, then being allowed to sit up and soon thereafter to walk about and resume gradually his ordinary occupation.

COMPLICATIONS.

The complications that may be encountered during the period of convalescence, and which change this ordinary peaceful period into a more or less stormy and anxious one for both the patient and the physician, taxing the latter's ability to the utmost, occur in the following order: Hemorrhage, intestinal paresis, peritonitis, intestinal obstruction, and stitch abscesses.

The occurrence of concealed hemorrhage, which fortunately at present seldom happens, especially when the vessels are tied with catgut taken directly from the absolute alcohol in which it is preserved, manifests itself usually during the first twenty-four hours by a rapidly rising pulse, decreasing in volume, and accompanied by a falling body temperature, dilatation of the pupils, and a clammy perspiration. When this condition is followed by a rapid rise of body temperature to 103 F., or

over, dissolution is imminent. As soon as this complication is recognized, the abdomen should be at once opened, and the bleeding point searched for and secured and at the same time an intravenous injection of saline solution should be given and the patient stimulated by hypodermic injections of strychnia. The decision as to the occurrence of hemorrhage and the necessity of reopening the peritoneal cavity should be made with deliberation, as the unnecessary performance of this operation may seriously endanger the life of the patient.

The advent of intestinal paresis is marked toward the end of the first day by distention of the abdomen and the occurrence of more or less vomiting, the contents of the stomach being ejected with nausea, and the fluid being at first of a yellowish color, but not having a fæcal odor. As the color of the fluid darkens, the prognosis becomes less and less favorable. It is well to bear in mind that vomiting resulting from the administration of the anæsthetics subsides usually during the first twenty-four hours, but that it may follow the administration of morphine. When the diagnosis of intestinal paresis has been made, the stomach should be washed out and salines given at frequent intervals until the bowels act, even if the saline is partially ejected by the patient. The writer's efforts have been crowned with success in more than one instance by the persistent administration of salines after the patient's condition had seemed hopeless. The stimulating enema already alluded to should be given and friction applied over the colon. If the bowels act the patient usually has no further trouble.

The onset of peritonitis is indicated by gradual but persistent rise of pulse, beginning on the second or third day, intestinal distention, and rigidity of the abdominal muscles, whether accompanied by elevation of body temperature or not. If the pulse rate rises and remains in spite of our efforts above one hundred degrees a minute, the outlook is generally unfavorable. As soon as this tendency of the pulse to increase in frequency after the first day is recognized, an effort should be made to move the bowels by the administration of calomel, followed by a saline. If this does not act in a reasonable time, another dose of calomel should be given, followed after an interval of several hours by another saline. A stimulating enema of seven ounces of a saturated solution of sulphate of magnesium and one ounce of glycerine is often very effective. If the bowels act freely our patient is generally safe, but if the symptoms persist instead of subsiding, a few stitches should be removed from the abdominal wound, and the cavity freely irrigated.

Stitch abscesses usually announce themselves by the occurrence of a rise of body temperature toward the close of the fourth or fifth day, and should be treated by the application of hydrozone and the removal of the sutures. The opening in the skin should, if necessary, be enlarged to allow of the free evacuation of the pus.

While the various symptoms described have individually to be considered and their meaning weighed, they also have to be considered collectively, and in judging of the gravity of the patient's condition the facial expression is of great value to those who have had experience. A depressed and anxious countenance generally denotes a grave condition, and a cheerful one, even if accompanied by an elevation of the pulse and temperature, that the condition is not serious. The physician charged with the care of a patient upon whom laparotomy has been performed should not think too constantly of peritonitis—that bugbear of all who have had little experience with abdominal work—and consequently feed the patient upon salines rather than with milk and soups. On more than one occasion the writer has known this fear to be the father of the thought, and the patient's life either sacrificed or convalescence needleessly prolonged by this error in judgment.

THE MEDICAL TREATMENT OF THE DISEASES OF THE UTERUS AND VAGINA. *

By C. K. Johnson, M. D., Burlington, Vt.

Suppression of the Menses.

By suppression of the menses is meant a sudden stoppage of the menstrual flow during a monthly period, or its suppression by causes working just at or before the beginning of the period, the congestion of menstruation having occurred but the flow necessary to relieve that congestion either being insufficient for the purpose or not taking place. The most common cause of acute suppression is a disturbance of the circulation due to exposure to cold, or over exertion, or frequently from some pelvic disease.

The treatment of this condition consists in rest in bed, hot fomentations to the epigastrium and a hot mustard foot bath. Sodium citrate, 30 grains every two or three hours, has been used with good results.

One or two pills of aloes and myrrh given at night are sometimes beneficial. Scarification of the cervix may also be tried. At the next period the same treatment should be repeated to establish the flow.

Acute Metritis and Endometritis.

Many cases of acute endometritis are connected with sudden suppression of the menses. In these cases the treatment already given should be tried. The immediate reappearance of the menstrual flow is usually accompanied by partial or complete relief, when rest in bed for a few days with hot fomentations complete the cure. When the menses do not reappear, however, the patient must be kept in bed until the main symptoms subside, and kept quiet for some time following, with a simple diet, salines, sitz-baths at a temperature of about 100° F., also hot vaginal douches given with the intention of preventing the disease from running a chronic course. Scarification of the cervix and glycerine tampons may be tried. At the time of the next period an attempt should again be made to bring on the menstrual flow.

When the disease results from placental remains the uterus should be thoroughly curretted, swabbed out with 95% carbolic acid, and then douched with a bichloride of mercury solution 1 to 3,000, followed by hot sterilized water. For severe cases beginning with chills, pain and high fever, an ice bag may be applied to the epigastrium, relieving the pain and reducing the fever. Morphine may be required if pain is severe. The bowels should be kept free by salines. After the acute symptoms have subsided hot fomentations are preferable to cold, which should rarely be used over twenty-four hours. Severe septic symptoms call for alcoholic stimulants, a nutritions liquid diet and tonics, especially quinine. Dr. Reed of Cincinnati, advises the following treatment for endometritis:

The cervical canal is dilated if necessary by means of a Nott or other small dilator; the posterior lip of the cervix is seized with a vulsellum and held by slight downward traction; the uterine cavity is then packed with a slender ribbon of dry sterilized gauze; this is immediately withdrawn, bringing with it the mucous from the endometrial surface. If the first packing is not satisfactory for the purpose a second may be used. After the mucous surfaces have thus been cleansed, the uterine cavity is again packed with a slender ribbon of gauze saturated with 98% carbolic acid. This is left in the uterine cavity and a glycerine tampon applied, the patient being allowed to go home, and returning in forty-eight hours for a repetition of the treatment. Three or four applications of this kind, made at lengthening intervals during ten days, are usually sufficient to cure an ordinary case of catarrhal endometritis. In using this method care should be taken not to bring the acid in contact with the vaginal mucous membrane.

* Read before the February meeting of the Burlington Clinical Society.

If, however, this should occur, apply alcohol immediately to neutralize the acid. This method is not particularly painful and never requires an anæsthetic.

Topical treatment, to be effective, must be brought in direct contact with the micro-organism. These are hidden within the epithelial folds or deep down in the mucous follicles. These bacteriocidal agents should be so applied that the entire mucous surface will be subjected to their influence. If any portion of the mucous surface remains untreated, and consequently infected, it becomes a focus for re-infection. These agents should also be applied for several days, so that not only the bacteria themselves, but their spores also, will be destroyed. Applications to parts bathed with a tenaceous mucous which of itself protects the underlying nucro-organisms cannot be expected to be very beneficial, hence the necessity of first cleansing the surface before these applications are made. A great many remedies have been tried in these cases with varying results, viz.: Boric acid solution 1-100; Formalin 1-1500; Bicarbonate of Soda 1-50; Chloride of Zinc 1-100 to 1-20; Silver Nitrate 1-10 to 1-5.

Menorrhagia and Metorrhagia.

The terms menorrhagia, meaning excessive menstrual flow and metorrhagia, hemorrhage between the menstrual periods, are often used synonymously to allude to excessive menstruation. If the patient suffers from excessive flow with an abnormal amount of blood, the treatment should be directed to the relief or cure of the pathological conditions upon which these symptoms depend. The patient should in severe cases be kept quiet in bed, given cold drinks, hot drinks or hot applications being contra indicated. If the condition is not dependent upon an acute inflammation the fluid extract of ergot in ½ dram doses every hour or two is a useful remedy. The fluid extract of hydrastis is frequently used but is rather slow of action. Frequent vaginal douches at a temperature of 100° F. to 120° F., may check the flow after it has commenced to subside. If needed, an ice bag may be kept upon the abdomen for several hours, and in extreme cases cold vaginal douches and the introduction of pieces of ice into the vagina may be beneficial. The vagina may be packed with gauze, saturated with a strong solution of alum or a solution of ferric sulphate and changed every twenty-four hours. This failing the uterus and vagina may be packed.

Cotarnine hydrochlorate or stypticin has been reported to be a very useful remedy in these cases. It may be used hypodermically or taken by the mouth. It is of no use in fungous endometritis until curetting has been employed, or in the hemorrhage of labor or abortion until the remnants of the ovum have been removed. Hydrogen dioxide has been used with success in uterine hemorrhage, about 4 c.c. being injected into the uterine cavity.

The intra-uterine application of steam has been used to some extent, but is not destined to become very popular. The risks of this method are stricture of the cervix, obliteration of the uterine cavity, and premature induction of the menopause. This method is termed vaporization, vapo-cauterization or autmocasis.

These cases are often associated with dysmenorrhœa, a condition of which I will speak briefly.

Dysmenorrhoea.

Dysmenorrhœa may be mechanical, the escape of the menses being painful by stenosis of the external or internal os uteri, the os-vaginal, displacements, tumors or polypi. A cure is often effected by the removal of the cause. The pain may be relieved by hot fomentations, hot turpentine stupes and hot drinks.

Membranous dysmenorrhoea is another variety characterized by the expulsion of a membrane from the uterus. This membrane may be a complete cast of the uterine cavity or in shreds. The pain usually begins with the

flow as in the mechanical variety, and may increase until it resembles labor pains. When the membrane is expelled the pain is usually relieved. This variety is usually dependent upon an existing endometritis; the treatment therefore is that given for that affection.

To illustrate a plan of treatment I have found successful in certain cases, in many of which I was unable to discover any satisfactory cause, I wish to report a case which may seem a little away from my subject. The patient, a young woman twenty-two years of age, gave the following history: Her menstrual periods had never been normal. beginning with severe pains two or three days before the flow appeared. From the start she flowed profusely, losing a large quantity of blood, the flow continuing eight to ten days. She was confined to the bed most of the time, slight exertion causing dyspnea and palpitation. On examination of the blood I found the percentage of hemoglobin to be 48, and the number of red corpucles to be 3,800,000. Various remedies had been tried without relief. I prescribed P. D. & Co.'s Liquor Sedans, one dram 3 or 4 times daily, beginning about three days before the expected period, the time when pain usually began, and continued this until the morning of the fourth day after the flow began, then substituting the following prescription:

Rx.	Acidi gallici	.2 grms.
	Ergotin	.325 grms.
	Hydrastin	.325 grms.

Sig. This dose every two hours until flow has checked.

The flow ceased the afternoon of the fifth day. The patient was around the house in two days and began taking Blaud's Mass 5 grains three times a day, gradually increasing to 45 grains daily and lived in the open air much of the time. The iron was stopped at the next period and the same treatment used as before. She rapidly improved and after three months treatment was in excellent health and the menstrual period normal. I have treated several such cases with like results.

The Menopause.

The menopause is the cessation of the actual function of the sexual organs. This usually occurs at about forty-five years of age. The manner of this change of life varies greatly in different women. One symptom of especial importance is the occurrence of profuse bleeding during this change. These hemorrhages are often caused by uterine polypi fibroids or cancer and should receive prompt attention before they are beyond help. The treatment of the menopause should be mainly symptomatic, keeping up the bodily strength. Sodium bromide 15 grains three times daily has often been tried. I have frequently used duboisine with good results.

Vaginitis.

This disease may be classified under several varieties, the most common being the acute, chronic, gonorrheal, granular and adhesive. The acute form, if neglected, may pass into the chronic form. It is often very obstinate to treatment especially in the upper part of the vaginae, that of gonorrheal origin being the most persistent. Small areas may escape treatment and be the cause of reinfection. The treatment, especially in the gonorrheal form, should be pushed vigorously until all traces of inflammation have subsided. Disastrous results may follow if the inflammation be allowed to extend to the uterus and tabes.

The patient should be kept as quiet as possible, the bowels kept free by salines; frequent warm sitz baths should be given and a copious vaginal douche two or three times daily, a hot saturated solution of boric acid being used or in the gonorrheal form bichloride of mercury solution 1-5,000.

Urethral, vulvo-vaginal and cervical discharges should receive attention to prevent reinfection. During the acute stage the douches are apt to be taken too far apart and may do more harm than good since they do not check the disease, and may carry it to the cervix. After the acute symptoms have subsided local applications should be used in

connection with the douches. A speculum being introduced, the entire vaginal surface should be touched with a 1-1,000 bichloride solution. In severe cases this should be repeated daily. In the more chronic varieties the patches of inflammation may be touched with a 5 to 10 per cent solution of silver nitrate. Tampons squeezed out of tincture of iron or dusted with tannin, bismuth or chalk may be used and changed daily.

LOCOMOTOR ATAXIA.*

By C. A. Pease, M. D., Burlington, Vt.

In discussing so important a disease as locomotor ataxia or tabes dorsalis, in this short time, it is impossible to go into its more minute details.

Tabes is the most common of all spinal diseases, being especially frequent in the larger cities. It is found in men more often than in women. The relative immunity that women appear to enjoy from tabes may be due to the fact that fewer women than men suffer from syphilis. This is the general belief, although many tables of statistics contradict it. For example: in the skin department of the John Hopkins Hospital and Dispensary for the two years preceding November, 1898, 130 men and 121 women were treated for skin manifestations of syphilis. During this time more men than women were admitted to the dispensary in general, so that it would seem that proportionately women are more susceptible to the disease than men. Only about 5% of tabetic cases occur in negroes and the disease is very rare in negro women. Tabes, in a large proportion of cases, occurs in persons who have had syphilis. So frequent is this association that it has been called a parasyphilitic affection, to distinguish it from true syphilis. There is no evidence of tertiary lesions as gumma formation in uncomplicated tabes. The evidence of the pathological relationship lies wholly in the frequent association of the two diseases in the same individual. It is a disease of adult life, the majority of cases occurring between the thirtieth and fortieth years. The onset is usually from five to fifteen years after the primary infection occurs. Specific symptoms are generally slight; often it is possible to ascertain only that the venereal ulcer had been present. Hereditary influences predispose towards it, and exposure to cold, overexertion, traumatism, sexual excess and alcoholism may unite as causes. The chief pathologico-anatomical alteration in tabes is the gray degeneration of the posterior tract. The tract appears gray, smaller and more shrunken than is normal. Microscopically the pathological process generally begins in the upper lumbar segment of Burdach's column. There is a degeneration of two symmetrical fields in that part of the posterior tract in which the posterior roots are formed. The degeneration of Goll's tract above is in part a direct result of this atrophy of Burdach's column.

In advance cases the whole posterior tract in the lumbar and dorsal regions is degenerated except a small area near the posterior commissure. In the cervical cord the disease is confined at first to Goll's tract; later the outer parts degenerate. The disease does not, however, confine itself to the white matter; "Clark's" column and the posterior horns, especially Lissauer's tract, may also atrophy. The posterior roots atrophy with great regularity. Some pathologists think that this atrophy is the primary lesion, and the cord changes secondary. In some cases it is possible to follow the disease to the spinal ganglia. The diseased process may extend to the medulla producing atrophy of the cranial nerves, especially the optic. There may be atrophy of the sensory nerves of the skin, more particularly of the lower extremities.

The point of origin of tabes has been sought for at different places. The view most worthy of consideration is that the exciting cause of

* Read before the Burlington Clinical Society Mar. 28, 1902.

tabes acts upon the spinal ganglia injuring them without altering them structurally, thus causing atrophy of the sensory fibres of the cord, medulla, and the periphery which come from the ganglia. This atrophy gradually ascends towards the ganglionic cells until their fibres are also involved.

The symptoms of tabes may well be considered under three heads: In the first stage (1) Westphal's sign, or loss of knee jerk, may occur years before any other symptoms appear, and is an almost constant symptom, although it may manifest itself in only one knee in some cases. (2) The Argyl Robertson pupil is the next most important symptom. It may be the only indication of future tabes and present only in one eye, being preceded by a sluggish or weakly reacting pupil. (3) Lancinating paine is severe, paroxymal and lightning like in character. The attacks are usually of short duration and occur at intervals of days, weeks and even months, although in some cases they may persist for a long time. As a rule they occur in the lower extremities and extend over various sized areas. In the later stages we find the dull, boring pains. These lancinating pains are rarely absent and may precede the graver symptoms by from ten to twenty-five years. (4) Analgesia is generally found in the lower extremities so that pricking with a needle produces no pain, although general sensibility is unimpaired. (5) Romberg's symptoms usually occur in the first stage but generally not as early in the course as the symptoms already mentioned. (6) Optic atrophy occurs in about 10% of cases and when it develops early the ataxic symptoms are usually less marked and often do not develop at all. (7) Difficulty in urination, (8) sexual weakness, (9) and gastric disorders may occur at this stage.

The disease is fully developed when ataxia occurs. The disorder is not a motor weakness but an incoordination which affects the lower extremities first. A peculiar phenomenon often occurring in connection with the ataxia, especially of the arms, is the inability to keep them quiet. The patient moves the finger or hand or raises the arm to a vertical position without being aware of it. Paraesthesia of the most varied types are constant symptoms, while analgesia and hyperesthesia are early objective symptoms. The optic atrophy is usually of a simple progressive type and involves both nerves although one may be affected more than the other and earlier. It may be the only tabetic symptom for a long time. Gastric crises may come on suddenly, the patients having severe pain in the gastric region or feeling as though the stomach was being twisted into a knot. Severe attacks of vomiting continue for days or weeks at interrupted intervals regardless of the time of taking food; then it suddenly ceases and the patient may eat again. Laryngeal, pharyngeal and intestinal crises may occur during the ataxic stage, but are rare. The tabetic arthropathies appear generally in the early stages, the knee joint being the most commonly affected, though there is no pain, redness, or fever; the joint swells and there is considerable fluid and rapid destruction of the joint. At the same time new bone is rapidly formed, increasing the volume of the joint. A perforating round ulcer developing on the plantar surface of the foot and boring inward occasionally exists and resists nearly all therapeutic measures.

Advanced cases of tabes are not difficult to diagnoseticate. Multiple-neuritis may be accompanied by pain, ataxia, Westphal's and Romberg's symptoms, but the bladder disturbances and the Argyl Robertson pupil are wanting. The optic atrophy, Westphal's sign and Argyl Robertson's pupil are often forebodings of general paresis. We must then look for the progressive enfeeblement of the mental faculties, scanning speech and paralytic attacks to make a differential diagnosis toward the end. Cases of tabes often develop symptoms similar to general paresis while cases of general paresis have tabetic symptoms that oftentimes offer

serious difficulty in making a differential diagnosis.

The course of the disease is chronic, extending over a period of from ten to twenty-five years or even longer. If ataxia and bladder symptoms develop early the course may be fatal in a few years. When optic atrophy is an early symptom the disease runs a long course. In the last stages the patient is bed-ridden and dies from marasmus, cystitis or from any inter-current disease. Recovery is rare. If the lightning pains or gastric crises are severe the course is shortened; on the other hand, the symptoms may be of diagnostic point only and not affect the patient's ability to work for several years. Not much response is to be expected from treatment except palliative. I have one case that has been taking nitrate of silver in ¼ gr. doses three times a day for six months, alternating occasionally with Fowler's Solution, taken to the physiological limit. The ataxia is a little worse than it was, but the other symptoms show a marked improvement. I have been able to control his pain by acetanalid in 4 to 8 gr. doses at night and can see an improvement in the gait by a course of methodical exercise in which co-ordinating movements were gradually retaught the patient. He was made to take daily exercise regular, but not too fatiguing, and by using his eyes and the rest of his sensory apparatus, he learned the amount of motor impulse necessary for co-ordinating movement.

A Question of Vaccination.—He was sitting by her side at dinner, proudly congratulating himself upon being where he could look down upon the beautiful neck and arms. "I am being tortured," she said, as she moved uneasily. "I have been vaccinated, and it is just 'taking.'" "Why," he said, unguardedly, as he cast another glance at that handsome neck and those lovely arms, "where were you vaccinated?" "In Boston," she replied, as a smile drove away the evidences of pain.—*The Med. Standard.*

THE INFLUENCE OF LA GRIPPE ON THE NERVOUS SYSTEM.*

By A. J. Willard, M. D., Burlington, Vt.

It is a mistaken idea of some that La Grippe is a modern disease. There is evidence of its existence as long ago as 415 B. C. From that time on to the sixteenth century there are frequent mentions, as well as graphic descriptions, of its periodical ravages. The earlier writers give us a vivid picture of its peculiar characteristics and mysterious fatalities—the latter having been undoubtedly much increased by the well-known unhygienic habits of the ancients. I recently came across a quaint portrayal of one of the modern epidemics by a poet (?) whose whimiscal rhymes I give in full:—

If you are sore to the core,
With aching bones and husky tones,
When you speak, and you are weak
In the knees, and you sneeze,
And often cough your head near off,
And you note that your throat
Feels quite raw, and your jaw
Feels as if you'd got a tiff,
And dull pains vex your brains,
Then you've caught it; you have got it;
It's the Grippe!

If you feel the heat steal
O'er your frame like a flame,
Till you burn, and you yearn
For chunks of ice at any price,
Then, like a flash the shivers dash
From head to feet, a chill complete,
And you shake and you quake,
And there's a desire for a fire,
And something hot, right on the spot,
To quickly drink, and you think
Right there and then, you'll ne'er be warm again,
Then you've caught it, you have got it,
It's the Grippe!

It's in the air, it's everywhere;
The microbe of the Grippe is on another trip,
And up and down, through all the town,
By night and day, it seeks its prey.
And it's the fad, if you are sad, and even mad,
Or if you sneeze, or cough, or wheeze,
Or feel too warm, or chills alarm,
To wear a look of grim dismay and hoarsely say:
I've caught it, I've got it,
It's the Grippe!

* Read before the 88th Annual Meeting of the Vermont State Medical Society.

But our present purpose is to consider a *particular* characteristic of this disease, viz., its influence on the nervous system, to which we now invite attention.

During one of the more recent epidemics of the Grippe, a writer in one of the medical journals put at the head of his article on that subject, "The New Nervous Disease." This shows how prominent at that time the nervous symptoms were—possibly more so than at some other time—and brings out the fact that the Grippe is par excellence a disease having a pronounced effect on the nervous system, selecting that portion of the human organism as its special victim. The morbific principle, so active and potent, call it what you please, "toxine," bacillus," "microbe," appears to have a special spite against the peripheral and cerebro-spinal nerves, but does not allow any of the others to escape wholly unscathed. I may attempt little more in this paper than to point out some of the more prominent evils inflicted upon the nerves by this disease which Fate seems to have decreed should be always with us.

You are all familiar with the different forms which the Grippe takes, called variously the "catarrhal," the "respiratory," the "febrile" or nervous," and others. I will only allude now in passing to the prodromal symptoms common to them all. The most prominent of these are pain and depression.

First. Pain, pain in the head, pain in the back, pain in the limbs. Pain, pain, pain, everywhere.

Second. Depression of spirits. This is usually so severe and in some respects so peculiar as ot itself so to mark the disease that there is no mistaking it. Very significant of this and expressive of the positiveness of our diagnosis, are the emphatic exclamations of many a one, who, having once experienced the Grippe, but who, having never had it before, is skeptical of its character as sui-generis, is sure of it now, beyond all question, by actual personal knowledge of its depressions. As a patient, who, by the way, was a man in perfect health and had never been sick an hour in all his life before, once said to me: "Something strange has seized me. I know not what it is but I *do* know that 'the blues' have me so bad that I verily believe the torments of the damned are no worse!"

Indeed, I have imagined that I could tell beforehand very certainly in any given instance that the attack was of the nervous form of the Grippe, if the pain in the head was exceptionally atrocious, the backache uncommonly savage and the other aches in every part of the body more than ever intolerable, all being accompanied by a depression to which the patient heretofore had been an entire stranger. It is strikingly significant of what is the matter when one whose temperament by nature is notably cheerful, suddenly becomes notably despondent, almost melancholic, so that he loses all interest in life, in himself and family, in his friends, in his business, in fact, in everything appertaining to this world and the next, and his ambition is only to be "left severely alone." If he be a doctor, he would banish his best patient to the nethermost regions of the dead! If a lawyer he would send his best client to the same place. And if he be a clergyman, he feels that he would like to do likewise to his most devoted parishioner and would undoubtedly signify the same by his words, if his cloth did not restrain him.

Now, when my attention is called to such cases I have commonly one remark to make and one advice to give, saying: "My friend you have got the Grippe and are having it pretty bad, and it is taking on the nervous form. But it is not dangerous and you will get well. In the meanwhile keep as quiet as you can."

Turn we, now, our attention to two types into which an eminent British physician* has divided his numerous cases of the Grippe.

* Dr. J. S. Bury, whose contribution to "A Discussion on Influenza as it Affects the Nervous System," is reported in the British Medical Journal, September 29.

First, the "comatose" type. The usual premonitory symptoms of the Grippe may not have been noticed nor any thing out of the way have been observed until an apathy, unusual in the individual, gradually supervenes. "What makes me so stupid?" is a question which is frequently asked of himself and of others. This feeling increases until one finds himself unable to attend to the ordinary duties of life. The attack sometimes ends here, the patient slowly recovering from his unusual feeling of apathy. But very often the disease goes on from bad to worse and the patient becomes so sleepy that he feels that he *must* sleep "whether or no"—often falling to sleep in his chair. And when he takes to his bed, he sleeps so soundly that he is aroused with some difficulty. He finds it hard to answer questions put to him. Sometimes a profound coma supervenes. From this severe state, however, the patient may gradually recover. But sometimes he does not, in which latter case post-mortem in some cases has revealed nothing sufficiently abnormal to account for what has happened. In a few instances that have terminated fatally, however, there have been observed a congestion of the meninges, or a suppurative condition of the same, or a hemorrhagic encephalitis. In some instances the trouble has gone on to the formation of cerebral abscesses. Although some other rare results have been noted they have not been of a kind to account for the peculiar attack and its fatality; while in very many, we have to note that the Grippe toxin has done its deadly work and "left no trace behind."

The second type mentioned by Dr. Bury is the "delirious." Here we enter a field which seems purely mental, and perhaps we should stop a moment and explain why it is that, in a paper treating of the influence of the Grippe upon the nervous system we deal so largely with its mental results. The truth is that it is difficult and well-nigh impossible to draw a sharp line between nervous and mental phenomena. These two are often so intimately connected that they seem to be one, although theoretically we are disposed to place our prominent mental cases in one class and the nervous in another. Indeed, for certain reasons there is no other way to do. But we must at all times keep in mind the fact that there is here such a state of things that both kinds of disease are brought together so intimately that separation and isolation can take place only with the greatest difficulty—if, indeed, it can be accomplished at all.

Now, then, in this evidently unsound mental as well as nervous state, the brain is working just as unhealthily as it ever does and the term delirium is applicable to that state just as truly as it ever is. But we have to bear in mind that we have here a delirium as one of several symptoms of a primary disease, namely, the Grippe. It is very much like what happens in other maladies, as, for example, typhoid fever, where we expect the patient to become delirious in the course of the disease, and we regard it as comparatively a minor matter from which the patient will certainly recover as he gets well of the chief disease. Just so it is here. The delirium is a symptom of the poisonous effects of the Grippe toxin upon the nerve centers, which we are led to expect will disappear when the Grippe poison has done its work, or has been eliminated or destroyed. Until then we have to do with a most unpleasant delirium, simulating that of a primary insanity though usually not so violent or persistent as that.

The onset of this delirium in the nervous form of the Grippe may be very sudden and wholly unhearalded, although afterwards there may be recalled very frequently certain significant symptoms on the part of the patient denoting that something rather unusual was taking place, certain signals, as it were, of the approaching storm. The patient's conduct seems rather strange. He is restless and irritable. He does things and says things that are not like him. There is an incoherence, with a certain wildness of manner, which are quite foreign to him when he is in health. These

may be followed by hallucinations or illusions, with possibly some decided delusions from whence there may be a rapid progress to a final, more or less fierce, outbreak of mania. These are comparatively rare instances, but they give the doctor considerable trouble, although the well-grounded expectation of a short continuance helps the better to bear the trouble until the disease has spent its force. A speedy termination, however, is not to be thought of too confidently, for, in not a few instances, for months and even years, the mind remains in a clouded, morbid, unnatural state.

I have for some time observed that many cases of a nervous and mental type which have come under my observation, can clearly be traced to the Grippe as the first, the chief, if not the only, cause. It is a matter of regret to me that a more careful and complete record of these cases was not made and preserved at the time. Of course it has been very difficult to get at the exact truth, for the patients were often vague and prejudiced in their statements of supposed facts, while the family physician, in the hurry of his busy life, has not found time to investigate thoroughly and carefully. I have sometimes found that what was supposed to be the cause was only the occasion—an attack of the Grippe having served only to bring out, and to the surface, and into activity, a latent nervous diathesis. Still, after eliminating the doubtful cases, the percentage is very large where the influence of the Grippe has been to affect the nervous system disastrously for a very long time.

It is an interesting question which is constantly presenting itself: "How does the grippe poison work thus viciously?" After entering the system, probably through the medium of the lungs, it is carried by the blood hither and thither, ramifying everywhere throughout the body, working mischief here and there in a manner which thus far has defied satisfactory explanation. Some one has said that the grippe poison is "very selective"—but just what that means is not apparent to me unless it be that is has special fondness for the nerves or a special spite against them.

In addition to the two types, the "comatose" and the "delirious," furnished by the British Medical Journal, I would like now to mention two others which I give on my own authority, having obtained a more complete knowledge of them from a rather disagreeable personal experience. These types, which are more common than those just given, I would designate as the "neurasthenic" and the "melancholic."

First. The neurasthenic. Now I venture to assert that whatever be the form that any given case of the Grippe is going to assume, whether it be the catarrhal, the respiratory, or the febrile, or the nervous, it will be attended with more or less prostration of nerve force. Sometimes this is the very first notable symptom. Sometimes it is the severest. It is very rarely absent and very significant is it of what its presence means, when we hear the strongest of men exclaim that they "feel as weak as water," for which feeling there is no apparent cause. A friend of mine, a physician, who is endowed with an exceptionally vigorous physique, once told me that he kept on working as usual while having an attack of the Grippe, but that the work went "mighty hard" and at times, in his expressive language, "dragged horribly," and one day he was obliged to drop every case that he could possibly. This prostration is both a symptom and a result—it may be mild or severe—of short or long duration, but present it will be sooner or later, and I have yet to see the individual who when the symptoms of the Grippe are unmistakable, could say that he was unaffected thereby.

Attending this state of nervous exhaustion there is commonly a condition of nervous irritability, and restlessness, and unreasonableness—terms which only partially describe those varying phases of the Grippe patient's experience. This is a peculiar condition of the sys-

tem, which for the want of a better word, we call "nervousness," where each and every fibre of the Great Sympathetic is vibrating incessantly, so that the most self-poised of men become the most unbalanced, and the most charming woman the most unlovely.

The next type that I mentioned, was the melancholic. Here the patient has what is popularly called "the blues." I have noticed that in the nervous form of the Grippe this depression of spirits is much more severe usually than in the other forms and verges on a true melancholia. Such a patient, though by nature never so cheerful, becomes grievously despondent. So completely does he lose all interest in life, that thoughts of seeking relief in suicide, as the only means of getting it, are by no means unfrequent. Dr. Weir Mitchell says that each individual is endowed by nature with such an amount of cheerfulness as will enable him, with more or less ease, to ride over the stormy sea of life. Be that as it may I feel pretty sure that the individual is but rarely met with, who can truly say that he feels a normal peacefulness when he is the victim of a severe attack of the blues such as the Grippe usually engenders.

I will now bring this paper to a close with a quotation from The Journal of Nervous and Mental Diseases of January, 1901, and Dr. Jelliffe's admirable "Periscope" in that number, where he reviews the "Discussion" before mentioned, enumerating many of the "nervous sequelæ" following influenza. "A rich harvest," he exclaims emphatically, "greater, in fact, than any following other infectious diseases." He then proceeds to tell us what a train of nervous ills the Grippe leaves behind —which makes very interesting and instructive reading.

"Affecting the brain, there may be neurasthenia, hysteria, epilepsy, delirium, and every variety of psychosis, with meningitis, encephalitis, cerebral-hemorrhage, embolism, and thrombosis of arteries, veins, or sinuses. In the cord, almost every variety of myelitis has been found, and in the nerves, neuritis, or neuralgia, in the territory of nearly every cerebral or spinal nerve. Retro-bulbar neuritis is of special interest. The paralyses affecting the bulbar nerves or their nuclei, are often very bizarre and illustrate one of the striking peculiarities of the influenza toxins. Isolated paralysis of the superior rectus, of the inferior and external rectus, with paralysis of accommodation, with paralysis of both third nerves, or both fourths or fifths or sevenths, or with one side of the tongue. All of these tend to recover. Cases of hemiplegia due to the Grippe were reported, and one fatal case of paralysis of the respiratory muscles in an influenza multiple neuritis. The cases of paralysis were very tedious and the prognosis quite grave, but the majority finally recovered, although at times with slight impairment. It was thought that the frontal cerebral lobes were especially prone to the action of the grippe toxin. Lumbar puncture was urged in order to clear up the diagnosis of many of the difficult cases. Analogies were observed as existing in the bizarre distribution of the Grippe symptoms, to precisely similar groupings in syphilis and the anterior poliomyelitis of children. These facts pointed almost exclusively to the toxin of the Grippe bacillus as the causative factor in these irregular paralyses."

Congestion of the prostate is most common in young and middle aged men, as the causes producing it are most operative at that period of life. The special causes of congestion of the prostate are diseases of the rectum, such as hemorrhoids, stricture or tumor, stricture of the urethra, excessive venery of any kind, either in the form of excessive sexual intercourse or excessive masturbation, or strong sexual excitement without gratification.—*Yale Med. Jour.*

NEWS, NOTES AND FORMULA.

ADDISON COUNTY DOCTORS — Nine of the physicians of Addison county met at Middlebury, April 29, at 10.30 o'clock in response to a call of Dr. J. M. Hamilton of Rutland, chairman of the committee of the State Medical Association, for the purpose of reorganizing the County Medical Society. The society had not met for 22 years. It was chartered by the State in 1813 and was very prosperous until 22 years ago, when it died out for the lack of interest.

The meeting was called to order by Dr. E. P. Russell of Middlebury, who at that time was a vice-president of the association and has never been relieved of the office. Dr. M. H. Eddy was also secretary and he occupied that place. Those present voted to reorganize and appointed a committee to revise the old constitution and by-laws, and bring them up to date. The committee are: Dr. M. H. Eddy, Dr. E. H. Martin of Middlebury and Dr. W. H. Vincent of Orwell. They are to report at the next regular meeting in June.

A county meeting will be held in Middlebury the first Thursday in June at the Addison House at 10.30 o'clock a. m. and papers will be read by members of the association appointed by this committee, who will also notify every physician in the county of the date and place of meeting.

The doctors signing the old constitution, thereby becoming members of the association, are: Drs. E. M. Martin, S. S. Eddy, F. C. Farmer, E. N. Bibbey of Middlebury; E. S. Weston, New Haven; F. C. Townson of Bridport and W. H. Vincent of Orwell, after which they adjourned.

OPPORTUNITY.—Opporchunity knocks at iviry man's dure wanst. On some men's dures it hammers till it breaks down th' dure an' thin it goes in an' wakes him up if he's asleep, an' aftherward it wurrks f'r him as a night watchman. On other men's dures it knocks an' runs away, an' on th' dures iv some men it knocks an' whin they come out it hits thim over th' head with an axe. But ivirywan has on opporchunity.—*Mr. Dooley.*

BURLINGTON AND CHITTENDEN COUNTY CLINICAL SOCIETY.—The regular monthly meeting of the Society was held at their rooms, 162 College Street, April 25, 1902, at 8.30 p. m. Following was the program:

Deciduoma Malignum,

Dr. Otto Schultze, New York.

Paper, (subject not given)

Dr. R. G. Pisek, New York.

General discussion and report of cases.

The papers were very scholarly productions and proved of unusual interest to the goodly number present.

THE AMERICAN CONGRESS OF TUBERCULOSIS.

POSTPONEMENT AND ANNOUNCEMENT

At the urgent request of many Southern and Western delegates, the annual meeting of the American Congress of Tuberculosis was postponed from the date originally announced, May 14, 15 and 16, to June 2, 3 and 4. This was done to facilitate attendance at both the Congress meeting and that of the American Med. Association at Saratoga, June 10-13. A large and enthusiastic session of the Congress is assured and the program as outlined will mean much in the future combat with Tuberculosis.

The following announcement has been sent out to members and delegates:

AMERICAN CONGRESS OF TUBERCULOSIS,

SESSION OF 1902.

NEW YORK, May 20, 1902.

Dear Colleague:

I have the honor to enclose you the announcement of the Congress for June 2d, 3d and 4th at the Hotel Majestic.

The Congress will be formally opened at 10 A. M. June 2d, 1902, and the morning session devoted to the opening ceremonies at which a large number of short addresses will be made by the representatives of foreign countries, and from the representatives from the various States of the American Union, of which a programme will be ready at the opening of the Congress.

Your attention is called to the First Symposium which will be the order for the afternoon session, of the first day, June 2d, under the chairmanship of Dr. Daniel Lewis, Head of the Health Department of the State of New York, as Chairman of the Committee in charge of that Symposium, of which the Secretary of the Congress will act as Secretary.

The debate will be on the following resolution to be offered by Dr. E. J. Barrick of Toronto:

"That it is the duty of every Government, Municipality and the individual Citizen to adopt organized methods for lessening the spread of a disease which is causing directly or indirectly probably one-fifth of the total deaths in almost every country in the world."

There will also be submitted for an expression of the views of Jurists upon the involved legal proposition, these questions:

"Has the State the right to pass and enforce laws to arrest and prevent the spread of Tuberculosis?"

"Should we favor preventive legislation respecting Tuberculosis; and the education of the professions of Law and Medicine as well as the masses of the people, in all civilized countries, so as to ensure the enforcement of laws enacted for such ends?"

The second Symposium will be discussed at the morning session of the second day of the Congress, at 10 A. M. under the chairmanship of Dr. J. J. Kinyoun of Glendola, Pa., and of which Dr. H. Edwin Lewis is Secretary.

The third Symposium will be considered at the afternoon session, 2 P. M. of Tuesday, June 3d.

This Symposium will be sub-divided:

1. a. The Medical and Surgical Aspects of Tuberculosis.
   b. Sanitoria.
   c. Climatic Conditions.
2. Light and Electricity.

The dinner will be given at 7 P. M. at the Hotel Majestic; seats $2.00 each, exclusive of wine, and will be reserved for the delegates in the order of their application. Wives of members will be welcome at the sessions and at dinner.

The Fourth Symposium will be considered at the opening session on Wednesday, June 4, at 10 A. M., under the chairmanship of Dr. D. E. Salmon, Chief of the Agricultural Bureau at Washington, D. C.

Professor J. G. Adami, of McGill University, of Montreal, will open and close the discussion,—a Report of Dr. Adami's views from his Report to the Canadian Government will be sent each enrolled member in advance of the session, and galley proofs of Dr. Adami's opening remarks will be sent to those delegates who will take part in the discussion of this Symposium under the same limits as to time. Please advise the officers.

This is sent out as a preliminary program of the order of business. The Bulletin of the Congress of 1901 is ready for delivery to members of that Congress.

The afternoon session of June 4th will be devoted to the election of officers for the ensuing year and miscellaneous business.

HENRY D. HOLTON,
President.

CLARK BELL,
Secretary.

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The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

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Burlington, Vt., May 25, 1901.

EDITORIALS.

LAY IDEAS OF DISEASE.—That the laity entertain so many erroneous ideas of disease can only be laid to the door of the average physician. In our conversation with patients we are very prone to use ambiguous or incorrect terms, and in our efforts to evade the questioning of the ignorant our answers are often very far from being scientific or comprehensive. A great many physicians have resented the inquisitiveness of patients in regard to disease and in an effort to surround medical knowledge with a certain mystery, their language and explanations have been ingenuous rather than honest. It is not strange, then, that so many patients have been *"threatened"* with typhoid fever, pneumonia or appendicitis, or that the origin of so many ailments can be traced to "a cold." The blood, also, is the culprit in countless instances and the more obscure the disease, the more positive the statement that "the blood is bad." "Purifying the blood" is a fad with so many physicians that little wonder can arise that so many patients are impressed with the sanguineous origin of most diseases.

Another fetich for medical conjuring is "heart disease." It is rare to find a patient who has consulted many physicians free from the belief that he has "a bad heart." And woe be unto the doctor who has the assurance to lay precordial distress to over-eating or gastric derangement.

Still further distorted are the lay ideas of kidney or bladder affections. Every pain in the back is Bright's Disease and all bladder trouble signifies "inflammation of the kidneys."

Knowledge of this kind does not elevate medical practice. It may not be necessary for patients to understand their cases, but "a little learning" is no more dangerous than a great deal of ignorance. There is nothing mysterious about the practice of medicine and it does not harm a physician to judiciously explain the nature of the disease or physiologic aberration he is called upon to treat. The majority of patients appreciate a physician's recognition of their intelligence,and a little more dissemination among the intelligent classes of wholesome knowledge in regard to the causes and nature of disease, will accomplish a great deal in the future prevention and treatment of human ailments. The physician has a duty aside from the diagnosis and treatment of disease, and that is to educate the people in hygienic and sanitary matters. To the extent that he gives obscure or incorrect explanations, his effectiveness for good in his community is impaired, and he need not be surprised to sooner or later see some other and more honest physician filling his place in the confidence of the people.

EDITORIAL NOTES AND CLIPPINGS.

SUBSTITUTION AGAIN.—A most valuable legal decision, of the greatest importance to doctors, on the substitution evil, has been handed down by Judge Fessenden of the Superior Court of the State of Massachusetts in the case of the M. J. Breitenbach Company, plaintiff, vs. Henry Thayer & Company, defendant, in which he enjoins the latter firm by injunction from putting upon the market an imitation of the preparation of the plaintiff's.

The M. J. Breitenbach Company are well known for their ethical marketing of Gude's Pepto-Mangan, a pharmaceutical preparation of the peptonate of iron and manganese. In many ways it has proven superior to any other preparation of like character in the treatment of anemia and allied conditions. Its efficacy developed a remarkable popularity and the enormous demand for Gude's Pepto-mangan has been little short of phenomenal.

Henry Thayer & Co. thereupon concocted a preparation styled Iron Peptonate Manganese, which they alleged to be identically the same as Gude's Pepto-Mangan and adopted as a container, therefore, a package sufficiently similar in appearance to that of Gude's to deceive the buyer or consumer.

It was shown conclusively at the trial that this similarity of containers was not the result of accident, the resemblance in appearance having been deliberately planned by Henry Thayer & Co., for the purpose of misleading those acquainted with the merits of Gude's Pepto-Mangan. So much for the external appearance of the two preparations.

It was also proven conclusively that Henry Thayer & Co. did not submit samples of their concoction to the members of the medical profession, as is the custom in such cases (which custom was followed by the M. J. Breitenbach Co.) nor did they in any way whatsoever invite or encourage physicians to inquire into its value. On the contrary, they sold it directly to retail and prescription pharmacists for the evident purpose of having them employ it as a substitute for Gude's Pepto-Mangan.

That the concoction is not the same as Gude's Pepto-Mangan, save in external appearance, was shown by Dr. Ogden, demonstrator of chemistry of Harvard University.

Dr. Ogden further proved to the entire satisfaction of the court that Henry Taylor & Co.'s Iron Peptonate Manganese was not a peptonate as alleged by them, it being nothing more than an unstable albuminate.

This is invariably the way with substitutes. They are always inferior to the product they imitate and owe their origin to an attempt to profit by deceit and dishonesty.

We congratulate the M. J. Breitenbach Co. on their victory and feel sure that the profession will be truly grateful for their efforts in exposing and stopping the nefarious methods of the substitutor. Pepto-Mangan has too many friends to allow supplanting, except by fraud, and all steps that will minimize this danger will be truly apreciated by physicians in general.

Alkaloidal Medication. — Burggraeve, the father of Alkaloidal Dosimetry, is dead, ripe in years and leaving behind him a monument far more enduring than marble. What he accomplished for scientific therapeutics will make his name remembered long after the present generation has passed away. In this connection we cannot forego speaking of a firm in this country who have done the most to further Burggraeve's ideas of dosimetry and alkaloidal medication. We refer to the *Abbott Alkaloidal Company* of Chicago, Illinois. The accuracy and uniformity of their granules have won thousands of adherents to alkaloidal ideas and methods. A number of imitations have sprung up but we think the bulk of the profession will agree with us when we say that the Abbott Alkalodial Co.'s goods have given us far more satisfaction and positive results than those supplied by any other firm. Physicians, honest to themselves and their patients, want the best. Price is a secondary factor. The Abbott Alkaloidal Co., however, supply the best at the best price, and there is nothing further to be said.

Success and Gratitude.—We beg to gratefully announce to the medical profession the removal of our offices and laboratories to 105 Chambers St., New York, N. Y., where with greater space and more extensive facilities we shall be better enabled to take care of the increasing demand for Ergoapiol (Smith) and Glyco-Heroin (Smith).

After having our personal statements as to the unusual efficacy of these preparations in their respective indications verified by hospital and clinical investigations, we sought to interest the physician individually, and the satisfaction of those who have investigated either or both could not be more fully manifested than in the necessity of our new and more commodious quarters.

Indeed none the less is our gratitude to the VERMONT MEDICAL MONTHLY, which has been so frequently mentioned in the communications requesting trial samples, etc., therein showing the large and widespread circulation of so consummate and estimable a journal.

Very sincerely,

MARTIN H. SMITH CO.

MEDICAL ABSTRACTS.

STRABISMUS—ITS TREATMENT.—A. Edward Davis (*Journal of American Medical Association*), concluding an article on this subject, says:

1. That it is desirable that we have a uniform or standard set of tests for the accurate measurements of strabismus.

2. A better understanding of the physiological action of the ocular muscles and of physiology in general, than at present obtains, should be had by those treating and operating on strabismus cases.

3. The amblyopia present in most cases of convergent strabismus is functional and acquired, and not congenital except in rare cases.

4. The non-operative treatment of strabismus—atropin, the exclusion pad, and, in patients old enough, glasses, the steroscope and bar-reading—should be begun as soon as the squinting is observed; for, it is in the early cases that this form of treatment is capable of doing so much good. By means of it, if the case is taken in time, false fixation and suppression of the images in the squinting eye are prevented, fusion of the images encouraged,and form-perception,that is,true binocular single vision often maintained. Eeven where one or more of these functions have been lost persistent effort in the non-operative method of treatment frequently restores them.

5. About 30 per cent. of all cases of strabismus may be cured by non-operative treatment alone.

6. Just as soon as the non-operative method of treatment ceases to improve the condition of the squint, it is time to operate. Delay in operating after this is not only useless but harmful, because the habit of suppressing the image in the squinting eye becomes fixed and the amblyopia worse.

7. After the eyes have been operated on, the use of the steroscope, bar-reading, the pad, glasses, etc., are of the utmost use in completing the cure.

8. Panas' method of operating for strabismus by stretching the muscles before cutting them is to be recommended as safe in execution, quick in results and efficient. It should never be performed while the patients' eyes are under the influence of a hydriatic.—*Charlotte Med Jour.*

THE NEGLECT OF CLINICAL MEDICINE.—Dr. F. R. Burnham (*Southern California Practitioner*, January), in some very interesting and suggestive Observations in Johns Hopkins, calls attention to the fact that surgery is the fad of the day; everybody from the new graduate without experience but tremendous ambitions and unbounded confidence, to the accomplished surgeon would carve his way to glory and renown by means of the scalpel. In no place has he been so impressed with this fact as at Johns Hopkins Hospital where, to a far greater extent than any other place he has visited, the grandest opportunities in all lines of medical thought and research are within the reach of the student, and yet, he says, nine out of ten of the post graduates neglect everything else for surgery. "From early in the morning until late at night both Dr. Kelly's and Dr. Halstead's operating rooms were crowded to the utmost limit of observation, and then only a few of the fortunate ones were able to see the details of the operation.

"These men seemed utterly oblivious of the fact that, at the same time, Dr. Osler, one of the most accomplished teachers of clinical medicine in the world, was going through the hospital wards giving the most helpful practical

clinical lectures that it was ever my good fortune to listen to. Dr. Osler's lectures at the bedside were perfect diagnostic gems, concise, full of well-ordered thought from a large and long experience. Nineteen out of twenty of the doctors doing post-graduate work need diagnostic skill far more than a better technique in surgery. Instruction in diagnosis is not gained, at least to only a very limited degree, in witnessing surgical operations in the presence of a crowd. We cannot all be surgeons, neither is there need that we should be, but we ought all to be able to summon to our aid, in every case, all of the helps that modern scientific medicine has so bountifully put within our reach. The crying need of the profession to-day is not surgeons, but great diagnosticians."

THE UNRECOGNIZED CHANCRE.—In the *International Medical Magazine* for October, William S. Gottheil calls attention to the frequent insignificance and fugacity of the syphilitic initial lesion,which leads to its non-recognition in quite a large proportion of coses. Ignorance of its occurrence,and not voluntary falsification, is cause of frequent absence of a syphilitic history in undoubtedly specific cases. The author calls attention to the following points of diagnosis:

1. The presence of a tumor as the original lesion. In its essence, and invariably at the beginning, the chancre is a small round cell accumulation in the skin or subcutaneous tissue. Ulceration may occur, and usually does, or even phagadaenism; but these are accidental, and epiphenomena, and almost invariably the specific induration is appreciable at the base of the lesion.

2. The tumor is indolent, painful, and recalcitrant to treatment.

3. A peculiar and characteristic "stony" induration of the nearest lymphatic glands accompanies it, different from the general adenopathy that occurs later as a consequence of the systemic infection. Other lesions, as gummata, do not show it.

4. Chancre runs its full course in a few weeks, whilst tuberculosis takes months and carcinoma even years, for its development.

5. The well known signs of general luetic infection, osteocopic pain, cephalagia, synovitis, general lymphadenitis, exanthem, etc., must be carefully and persistently searched for in every suspicious case. They may be so slight as to entirely escape careless examination.

ERYSIPELAS.—J. M. Anders in *Practice of Medicine*, says: When the fever is alarmingly high, it must be reduced by cold sponging, cold baths, ice-cap, gauiacol, applied externally, etc. For pain, sleeplessness and active delirium, hyoscin hydrobromide, gram 0.0006 (gr. 1-100), is indicated, or sodium bromide, gram 0.3 (gr. v), every two hours, or gram 1.3-2.0 (gr. xx-xxx) at night, or morphine, gram 0.008 (gr. ⅛) and chloral, gram 0.65 (gr. x), every half hour for three doses, or atropine and morphine, or potassium bromide and tincture of cannabis, gram 0.65 (mx). Iron and quinine and alcohol and strychnine should be given with a free hand. The air can be excluded from the part, an important procedure, by carbolized vaseline. As the streptococcus is found in the more superficial channels of the corium, scarification with the application of mercuric chloride solution, 1:4000, is a rational antiseptic treatment.

NERVOUSNESS GAVE HIS WORDS A TWIST.—Everything was in readiness. The groom, best man and the minister were gathered in the vestry. The organist began to play and the minister started for the door.

"Wait one moment, doctor," called the nervous groom. "Is it the right or left hand the ring goes on?"

"The left," hurriedly replied the minister.

"And, doctor, is—is it kisstermary to cuss the bride?"—*Philadelphia Times.*

BOOK NOTICES.

THE INTERNATIONAL TEXT-BOOK OF SURGERY, by American and British authors. Edited by *J. Collins Warren, M. D. LL. D.*, Prof. of Surg. in Harvard Med. School, and *A. Pearce Gould, M. S., F. R. C. S.*, Surgeon to Middlesex Hospital. Vol. I, *General and Operative Surgery;* 458 illustrations in text and 9 full page plates in colors. W. B. Saunders & Co., publishers.

The editors of this remarkable book have aimed to produce a reliable text-book of surgery, embodying a clear but succinct statement of our present knowledge of surgical pathology, symptomatology, and diagnosis, and paying such attention to treatment as is dictated by the needs of modern surgical practice. This, the first volume, admirably shows the successful result of their efforts and the book before us will stand for a long time without a peer as a solid, substantial and eminently conservative exposition of general and operative surgery.

As the editors well say, surgery has been developed mainly by special work and the field has consequently become so broad that it is impossible for one man to compass all the varied subjects. As a result, this work is the product of many men, all leaders in the special departments they have assumed. This method assures a complete and broad work and through able editing it has been made uniform in standard and teaching.

Vol. I. is a book that speaks for itself. Its worth is evident on the most cursory examination and for practical usefulness it will be found without a superior. Like all of Saunders' works the work appears with all the embellishments of good paper, clear type, beautiful binding, and ample illustrations. For even a modern book this one sets a high standard and in this day of scientific and artistic publishing, this is saying a good deal.

INTERNATIONAL MEDICAL ANNUAL. — A Year Book of Treatment and Practitioner's Index. 1902. Twentieth Year. Price, $3.00. New York: E. B. Treat & Co., 241-243 West 23rd Street.

During the score of years that have elapsed since the Annual was first launched, it has been enlarged from a handbook of 300 pages to one of 688 pages. Its thirty-six present contributors include some of the best authorities of the English-speaking medical profession. The articles are complete in themselves, and include, besides a careful digest of medical progress, much of value in the way of original comments. The text contains a number of handsome plates and other figures.

The Medical Annual makes it possible for every practitioner to not only keep abreast of scientific progress, but also to possess a handy complete epitome of current topics. The price is remarkably low, when its worth is considered and its friends would pay many times $3.00 rather than be without it. It is ever welcome and as it makes its appearance each year our attachment for it grows stronger and stronger.

MORPHINISM AND NARCOMANIA, from Opium, Cocain, Ether, Chloral, Chloroform, and other Narcotic Drugs; also the Etiology, Treatment, and Medicolegal Relations. By T. D. Crothers, M. D., Superintendent of Walnut Lodge Hospital, Conn.; Professor of Mental and Nervous Diseases, New York School of Clinical Medicine, etc. Handsome 12mo of 351 pages. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $2.00 net.

The alarming increase, in the last few years, of morphomania and the associated various narcomanias imperatively demands immediate attention by the medical profession. Every year the increasing prominence of this psychosis calls for more exact studies, with a fuller recognition of the conditions and causes of the disease. Medico-legally, questions of responsibility have been asked with increasing frequency, and there has been no literature and no study of the subject to afford an intelligent answer until this present volume was initiated.

The special object of this work has been to group the general facts and outline some of the

causes and symptoms common to most cases, and to suggest general methods of treatment and prevention. The object could not have been better accomplished. The work gives a general preliminary survey of this new field of psycopathy, and points out the possibilities from a larger and more accurate knowledge, and so indicates degrees of curability at present unknown. The author shows his absolute familiarity with his subject in the clear, concise, and in every way admirable work which he has given to the profession, whom he has placed under merited obligations.

The enormous number of narcomaniacs constantly being met in practice,makes it necessary for the physician to possess a wise, liberal knowledge of the subject. This book by Dr. Crothers is an able treatise on all the phases of the question and as such should be in the hands of every intelligent, progressive physician.

THE AMERICAN ILLUSTRATED MEDICAL DICTIONARY. For Practitioners and Students. A Complete Dictionary of the Terms used in Medicine, Surgery, Dentistry, Pharmacy, Chemistry, and the kindred branches, including much collateral information of an encyclopedic character, together with new and elaborate tables of Arteries, Muscles, Nerves, Veins, etc.; of Bacilli, Bacteria, Micrococci, Streptococci; Eponymic Tables of Diseases, Operations, Signs and Symptoms, Stains, Tests, Methods of Treatment, etc., etc. By W. A. Newman Dorland, A. M., M. D., editor of the "American Pocket Medical Dictionary." Second Edition, Revised. Handsome large octavo, nearly 800 pages, bound in full flexible leather. Philadelphia and London: W. B. Saunders & Company, 1901. Price, $4.50 net.

A large first edition of the work was issued in October, 1900. From the day of its publication the book met with a remarkably large sale, and the edition was exhausted in eight months. This immediate success is doubtless due to certain special features which distinguish this work from other books of its kind. The avowed object of the author has been to furnish in a volume of convenient size an up-to-date dictionary, sufficiently full for the requirements of all classes of medical men, or, in other words, to give a maximum of matter in a minimum of space and at the lowest possible cost. This object has been secured by the use of a large page, thin bible paper, and a flexible leather binding. The result is a truly luxurious specimen of bookmaking.

In this edition the book has been carefully revised. The author has also added upward of one hundred important new terms that have appeared in medical literature during the past few months. Among them appear "Anopheles," "Cryoscopy," "Johimbin," "Hemolysin," "Hedonal," "Sacrectomy," etc., words that have recently come prominently before the profession, and which of course are not to be found in any other dictionary.

Other valuable features of the book are to be found in the complete and satisfactory definitions, the etymological references in the original languages, and the clear method of indicating the pronunciation. There are over one hundred new tables, and the illustrations add greatly to the usefulness of the book.

In the preface the author avows his intention of making the book represent as fully as possible the live literature of the medical sciences by keeping it in all respects thoroughly up to date. How well he has done this is amply shown by his book. It is an admirable desk companion.

Jonathan Hutchinson, F.R.S., General Secretary of the New Sydenham Society, has requested Messrs. P. Blakiston's Son & Co., of Philadelphia, the American agents of the Society, to announce the publication of "An Atlas of Clinical Medicine, Surgery and Pathology," selected and arranged with the design to afford, in as complete a manner as possible, aids to diagnosis in all departments of practice. It is proposed to complete the work in five years, in fasciculi form, eight to ten plates issued every three months in connection with the regular publications of the Society. The New

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ORIGINAL ARTICLES

SUNLIGHT AND MALARIA—CURE OF INTERMITTENT FEVERS BY DARKNESS AND FLUORESCENT LIGHT.

By A. F. A. King, M. D., of Washington, D. C.

Professor of Obstetrics, University of Vermont Medical Department, etc.

It is now well established that malarial fever is produced by a parasite (the *plasmodium malariae,* so-called), which feeds on and breeds in the red corpuscles of the blood; that this parasite gets into the blood by the bites of mosquitoes; that the fever paroxysms are produced by the periodic sporulation of successive groups of these parasites; and, that generally, but *not always,* the parasite is destroyed and the disease cured by quinine.

During the leisure hours of my sojourn in Burlington last summer, while thinking over the idea that malarial melanosis was a conservative process—a sort of "protective coloring" to hide man from the mosquito—as stated in my paper on "Mosquitoes and Malaria," published in 1883,* and regarding the whole process as a *pigment* disease, the idea of *color* suggested *light;* light suggested *darkness;* with these the variations of *day* and *night,* and the *diurnal periodicity* of malarial fever paroxysms, inevitably led me to the supposition that *sunlight* must have something to do in the drama of this disease. The facts that "chills" do not occur at night in the dark; and that people with *black* skins are more or less exempt, encouraged the supposition. Following out this idea, I have embodied the results in three papers recently published in the "*American Journal of Medical Sciences*" for February and June, 1902, and in the *Washington Medical Annals,*" vol. i, No. 1, for March, 1902.

A brief synopsis of those publications is here presented for the Vermont Medical Monthly. The following propositions were stated, viz:

1. The sporulation of malarial parasites in the blood will be retarded, or fail to take place at all, in continued darkness. Other things being equal, this sporulation will be the more rapid and complete in direct proportion to the intensity of the sunlight to which the body may be exposed and the duration of such exposure.

2. To *prevent* malarial fever (after infection) protect the human body from the *light* of the sun.

3. To *cure* the disease, protect the body from the light of the sun, or in some other way prevent the parasites from receiving this light.

The evidence in support of these statements is as follows:

First. The accumulated experience and observations of centuries, which have been supposed to prove the agency of solar *heat* in producing malarial fever, should really be attributed to solar *light.* Heat cannot warm the parasite while floating in a bath of blood at 98.2°. Light *can* enter a translucent skin and act upon the plasmodium, as we shall see farther on, it does upon other amœbæ.

Second. Paroxysms of regular intermittent fever will not, as a rule, occur at night, or in the dark. Exceptionally "chills" *do* occur at night; but often they are the chills of tuberculosis, or of secondary syphilis, or of suppuration, etc., etc, that have been *mistaken* for ague chills. Again, it is possible that *artificial* light or brilliant moonlight may develop sporulation of the parasite during the night.

Third. The relative liability and relative immunity of different races of men to these fevers will depend, respectively, upon the relative translucency or non-translucency, of their skin and of their blood. Black—*thoroughly* black—races are exempt. Many negroes suffer, because their skins are *not* impenetrable to light. In passing electric light through the

* See "Popular Science Monthly" for September, 1883.

external ears of over a hundred dark negroes, in Washington, I only found three that were impenetrable to light. These had never had ague.

Fourth. In places where malarial fever prevails, the disease is increased by bright, sunny weather, and lessened by clouded skies. In other words, when the light of the sun is veiled by rain clouds and fogs, the parasites get less sunlight and their sporulation is retarded. Numerous instances given.

Fifth. It is an old popular tradition that to prevent the occurrence of ague in malarial regions,or to forestall its *re*-currence when it has already occurred, it is best to keep in the *shade* and avoid sunlight. Popular traditions usually come from experience and are worth consideration. Centuries ago the native Africans believed that mosquitoes produced fevers. They were right.

Sixth. In typical cases of ordinary ague the disease is spontaneously curable, without medicine, by keeping the patient in the shade. Evidence presented.

Seventh. The malarial parasite is a naked amœba. Experiment shows that *red* light promotes the vital activity of amœbæ, while *violet* or *purple* light, restricts it. The *color* of the light diffused through the blood is, of necessity, *red,* as any one can see by holding the hand over a candle in a dark place. Harrington & Leaming (Am. Jl. Physiology, vol. III, No. 1, 1899, pp. 9-18) have demonstrated that the *amoeba proteus* streams in the presence of *red* light and ceases to stream in light from the violet end of the spectrum. Enucleated amœbæ stream in red light, and cease to stream in violet or white light.

Now if we assume that the malarial amœba is of the same nature(which, however, requires future demonstration) it would explain the cure of malarial fevers by methylene blue, by Prussian blue, and by iodine, which last becomes in the stomach *purple* iodide of starch.

But how about quinine? If this theory of light be correct, and if it be true that the parasite is destroyed in the blood by light from the violet end of the spectrum, the curative action of quinine should fall in line with this idea in some way.

Does quinine possess any peculiar relation with light that would furnish a clue to its curative effect? It does. It is remarkably *fluorescent;* it accentuates the violet rays of the spectrum and even renders the ultra-violet ones susceptible to human vision.

In support of this idea that it is the quality of fluorescence which gives quinine its curative value in malaria, I find first, that *other* substances possessing blue fluorescence, like quinine, notably *esculin* from the bark of the horse chestnut tree, and *fraxine* from the bark of the European ash, are effective antiperiodics in ague and have long been used successfully for this purpose.

As to quinine itself, the experiments or Drs. Rhoads and Pepper demonstrated over thirty years ago, long before we knew anything of the malarial parasite or mosquito, that in malarial disease the fluorescence of the blood is diminished, and that quinine restores the fluorescence to its normal standard, and *pari passu* with this increase of fluorescence the fever disappears and the patient gets well. (See Pennsylvania Hospital Reports for 1868, pp. 269-280). See also *Philadelphia Medical Times,* Jan. 23, 1875, p. 259 *et seq.*

It may be noted that the normal fluorescence of the blood was discovered by Dr. Henry Bence Jones in 1866; (see *Medical Times* and *Gazette,* London, August, 1866, pp. 163-167); he also found in all the organs and blood of men and guinea pigs, a fluorescent substance, which possessed *all* the chemical and optical properties of quinine, which he called "animal quinoidine." It was by following the experiments and discoveries of Jones, that Rhoads and Pepper were able to present to the world the twelve cases of ague in which they demonstrated that quinine cured by increasing fluorescence in the blood of fever patients. I am glad to have resurrected these cases and experiments from the oblivion in which they seem to have been engulfed for so many years.

Finally, why does quinine sometimes *fail* to cure? Why does its fluorescence apparently fail to act? Manson and others have kept patients cinchonized with quinine for days and weeks without a cure. I answer: These were cases of malignant parasites—the "æstivo-au-

tumnal" and others. The corpuscles containing them are not generally found in the *peripheral circulation,* where they can get light but *are* found in the solid substances of the spleen and liver, in the marrow of bones and capillaries of the brain, than which no darker recesses of the body can be imagined; and where, surely, the fluorescent light produced by quinine can never act.

These malignant parasites are usually found in the small blood corpuscles of anemic, cachectic patients. These *small* corpuscles are too diminutive to get arrested in the somewhat *large* capillaries of the skin, where they can get light, but *do* get arrested in the much smaller capillaries of the internal organs before mentioned.

In a typical tertian ague, the infected corpuscles are always enlarged, sometimes they are twice as large as an *un*infected normal blood corpuscle, and this causes them to be arrested in the large cutaneous capillaries where they get light to accomplish their sporulation. When this arrested group of infected blood corpuscles has remained exposed to sunlight in the peripheral vessels a sufficient number of hours (24, 48, or 72 as the case may be), sporulation of the whole group takes place and the consequent shaking ague *chill* occurs, which joggles them out of their capillaries, breaks them up and sends them along in the blood stream. After the chill comes *fever,* congestion of the skin, and a new lot of infected corpuscles, larger than normal, gain access to the dilated skin capillaries. Next comes the *sweat,* by which a deluge of water is exuded from these dilated skin capillaries, which causes their walls to close in and shut down upon the large infected corpuscles and so keep them arrested and exposed to light in the peripheral circulation, a s sufficient number of hours to accomplish their sporulation, when another paroxysm of ague, with its successive stages of chill, fever and sweat, repeats the process. Here quinine *can* cure by its fluorescent light. It cannot cure by the same means the cases in which the *small* corpuscles infected with malignant parasites do *not* remain in the illuminated parts of the circulation, but rest in the smaller capillaries of the interior where it is *dark.* Thus the exceptions in which quinine fails to cure by fluorescence, tends to prove the rule that it *usually does* so cure.

Finally, the future treatment of intermittent fever—prophylactic and curative—would seem to be scoto-therapy, that is if future experiment should prove my views to be correct.

THE DIAGNOSIS AND TREATMENT OF CHRONIC INTERSTITIAL NEPHRITIS.*

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While I shall scarcely contend that chronic indurative or interstitial nephritis, more particularly its early stages, is more frequently overlooked than is any other disease, it is, nevertheless, certain that the disease frequently pursues its course entirely unsuspected for a number of years. As a matter of fact, in the great majority of cases the early stages of the disease altogether escape recognition unless they are discovered accidentally, as for instance, by the routine examination of the urine of patients ill with other diseases, or in examining applicants for life insurance, etc. When finally after a number of years the disease does give rise to noteworthy symptoms, these for a time at least are very likely to be attributed to disease of some organ other than the kidney. Thus while the patient may present himself with the idea that he is suffering with diabetes on account of the large amount of urine that he voids, he is just as likely to complain of dimness of vision, the consequence of albuminuric neuroretinitis; of one of the many manifestations of uremia, such as dyspnea, asthma, gastrointestinal derangements (gastric catarrh,

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gastric hemorrhage, diarrhea), headache, hemicrania, tinnitus aurium, vertigo, etc.; of neurasthenia, pains in the muscles, or joints; of eczema; of palpitation of the heart and precordial distress; or, the patient in apparent good health, may suddenly develop a severe or even fatal attack of cardiac failure and pass into uremic coma or convulsions, or he may suffer an apoplexy and die. The first obtrusive manifestations of the disease, therefore, vary materially in different cases.

In whatever manner the disease first manifests itself, the diagnosis rests upon the results of an examination of the urine and of the cardiovascular apparatus. Edema, a symptom of much diagnostic value in acute nephritis and in chronic nonindurative (parenchymatous) nephritis, is singularly absent in chronic indurative (or interstitial) nephritis until late in the course of the disease, until the supervention of cardiac failure. When it does occur it partakes of the nature of cardiac dropsy rather than of renal dropsy. In some cases, however, we may detect very slight edema even in the rather early stages of chronic interstitial nephritis—whence I may point out that the significance of the puffiness of the eyelids that often comes on in men and women past the fortieth year can scarcely be overestimated.

The condition of the urine in chronic interstitial nephritis is too well known to warrant any detailed reference to it. In passing I may refer merely to the increased quantity of urine and to its lowered specific gravity. Especial importance, however, attaches to the albuminuria and to the results of a microscopic examination of the urinary sediment—preferably after centrifugalization. The amount of albumin is often slight; in some cases none may be detected. As a matter of fact albumin may be absent from some specimens and present in others; it may be absent for days and even weeks at a time; it may be missed in the early morning urine and found in the urine voided later in the day; and it may be present only after exercise, emotional or other excitement, or after eating. In the last named respect it resembles, but will scarcely be mistaken for, the so-called functional, physiologic, cyclic, intermittent, or paroxysmal albuminuria that is sometimes encountered in adolescents. A microscopic examination of the urinary sediment should not be neglected, not even in cases that reveal no albuminuria. In many such cases a few casts, usually hyaline, rarely pale granular and epithelial, may be found. Casts are rarely abundant, and in most cases the detection of even a few casts presupposes patient, diligent search. Persistence of casts, even in the absence of albuminuria, should be looked upon as definite evidence of chronic Bright's disease. In most cases in which casts are found, however, albuminuria, if searched for, will also be found.

In addition to changes in the urine, changes in the cardiovascular apparatus are by far the most important concomitants of chronic interstitial nephritis. From the very beginning of the disease, the heart and blood vessels in response to excessive functional demands suffer more or less; they reveal more or less deviation from the normal. The clinical evidence of such deviation from the normal consists of hypertrophy of the heart, especially of the left ventricle, of accentuation of the aortic second sound of the heart, and of increased arterial tension. These are continuously present(until late in the course of the disease), and they may be recognized whether or not the urine persistently contains albumin and casts.

Hypertrophy of the heart is found in all forms of nephritis, but not in all cases. In none of the varieties, however, does it so dominate the clinical picture as it does in the chronic indurative nephritis. It may be expected from the time of the contraction or atrophy of the kidney, be it of the primary or the secondary variety. Thus it develops early in the primary form; it may be (but usually is not) much delayed in the secondary form. It may, however,occur in chronic diffuse nonindurative (parenchymatous) nephritis, and it has been

observed also in some cases of acute nephritis, especially in those that follow some of the infective diseases, such as scarlatina, etc. In some of the chronic cases in which it should be expected, for some more or less inexplicable reason, it does not occur. Its absence may be due to faulty nutrition—the heart not being sufficiently nourished to enable it to hypertrophy; to sclerosis of the coronary vessels; to the vicarious action of one or the other emunctories removing those excrementitious products ordinarily eliminated by the healthy kidneys; etc.

In some cases the hypertrophy of the heart is slight and readily escapes clinical recognition; in other cases a manifest hypertrophy is obscured by co-existing emphysema of the lungs. With care, however, we may assure ourselves that the apex beat is displaced downward and outward; that it is forcible and heaving in character; and that though broader than normally it is well circumscribed. By percussion we may determine that the cardiac dulness is increased in the direction of the long axis of the heart—to the left and downward. The first sound of the heart at the apex is prolonged, dull and low-pitched; but, what is especially characteristic is the accentuation of the aortic second sound. Such is the importance of this sign that, in the absence of other causes to account for it, it is extremely suggestive of chronic nephritis. This and arteriosclerosis are really its most common causes. When heard it should always awaken the suspicion of chronic nephritis, and even in the absence of albumin in the urine, the probability of such kidney disease must not be abandoned until the accentuation of the second sound is otherwise adequately accounted for, and until long continued observation determines the non-existence of nephritis. It is often the first indication of the insidiously developing chronic nephritis, and it may be heard in some cases in which enlargement of the cardiac dulness and displacement of the apex are at most problematic, in some cases even before enlargement of the heart and definite increase of the tension in the radial artery can be made out.

Increased arterial tension, however, may be expected from the beginning of the disease, and it is one of the most valuable signs of chronic indurative nephritis. The pulse of high tension is quite characteristic—it is hard and resistant to the palpating fingers, it remains persistently full between beats (and this is its distinctive characteristic), and considerable pressure is required to completely arrest the pulsations. The sphygmographic tracings also are quite characteristic. Inasmuch as increased arterial tension is found in conditions other than chronic interstitial tension, questions of differential diagnosis sometimes arise; but these become much simplified when we recall that the conditions with which increased arterial tension is most frequently associated are themselves often the cause or the concomitant of chronic nephritis—thus, lead poisoning, gout, arteriosclerosis, etc. Other conditions associated with increased arterial tension, as a rule, may be readily discriminated.

The existence of these cardiovascular changes, as well as the renal changes, may remain for a long time unknown to the patient and be entirely unsuspected by the physician. Whatever be the exact cause of their production (and many theories have been advanced, but as yet the correctness of none has been conclusively demonstrated), it is certain that they arise in response to excessive demands on the part of the general economy. So long as the heart continues to perform its increased work well no symptoms arise. Inquiry, however, in some cases will elicit the information that for years, possibly, excitement and exertion have been provocative of breathlessness and palpitation of the heart; but having an obvious cause they were regarded as insignificant. As the disease advances, however, the nutrition of the heart no longer keeps pace with its enlargement, degenerations ensue, and evidences of embarrassed circulation result. It is now

that symptoms referable to the cardiovascular system dominate the clinical picture. To the hypertrophy of the heart if it were simply there supervenes dilatation, and to disease of the left ventricle is added disease of the right ventricle. There result cardiac asthma, congestion and edema of the lungs, bronchitis, gastrointestinal disturbances, diminution in the daily quantity of urine secreted, and generalized edema. The symptoms referable to the heart and lungs at first transitory and nocturnal become permanent, the other symptoms mentioned are added, and if relief be not afforded, death ensues with cardiac failure or uremia dominating the clinical picture. Toward the end of life, the pulse that had been of increased tension becomes of lessened tension, the aortic second sound becomes less accentuated, the pulmonary second sound becomes accentuated with embarrassment of the circulation, the signs of dilatation develop, and gallop rhythm, always of serious moment, supervenes.

In the stage of cardiac compensation, the diagnosis of chronic indurative nephritis is sufficiently evident from an inquiry into the antecedents of the patient, the special etiologic factors in the case, the course of the disease, the different clinical manifestations, and the results of an examination of the urine and of the cardiovascular apparatus. However, when lack of cardiac compensation develops, diagnostic difficulties may arise. The clinical picture in these cases much resembles that of an affection primarily cardiac and secondarily renal. Given a patient with evident lack of cardiac compensation; with signs of hypertrophy and dilatation of the heart, but with such dilatation that it may be almost impossible to determine accurately which side of the heart is especially involved; with or without murmurs; with albumin and casts in his urine—does he suffer with a condition primarily cardiac and secondarily renal, or vice versa? Is the affection one of primary heart lesion with secondary congestion or cyanotic induration of the kidney, or is it one of primary kidney disease with secondary hypertrophy and dilatation of the heart? In many cases the question is extremely difficult to settle off-hand. In the majority of cases, however, the diagnosis may be made by bearing in mind that in congestion of the kidneys, the casts are hyaline only, and that the amount of albumin varies from time to time with the state of the cardiac activity—increasing or decreasing in amount with impairment or improvement in the condition of the heart. Again, in renal congestion, we endeavor to ascertain the cause by referring to the past history of the patient, and by noting that the kidney lesion is but part of a general condition that finds its expression also in congestion of the liver and spleen, effusions within the several serous cavities, anasarca, etc. The presence of a diastolic murmur, indicative of either mitral stenosis or aortic insufficiency, is suggestive of a primary cardiac condition, whereas the presence of neuroretinitis or retinal hemorrhages is practically conclusive evidence of a primary renal condition. In many cases the therapeutic test, the administration of digitalis, etc., is of the greatest value. If, as sometimes happens, the administration of digitalis is followed by marked improvement in the condition of the patient, with ultimate disappearance of albumin and casts from the nrine, the condition is definitely determined to have been renal congestion. If, on the other hand, with improvement in the cardiac condition,albumin and casts do not disappear from the urine, one may be confident of the existence of nephritis—a conviction that may be confirmed by an examination of the cardiovascular apparatus now that compensation has been restored.

From the natural history of chronic indurative (or interstitial) nephritis we derive our indications for treatment, which are: 1. As far as possible, to remove the etiological factor in the individual case; 2. to prevent the accumulation of waste metabolic products in the system; 3. to maintain the integrity of the cardiovascular apparatus; and 4. to meet the sympto-

matic indications as they arise. Thus, as in the diagnosis, so also in the treatment, the cardiovascular alterations dominate the situation. In the early stages of the disease, when cardiac debility has not yet occurred, appreciating our inability definitely to cure our patient, we should be alert to the dangers that threaten him. The dangers most to be apprehended are cardiac failure, rupture of the smaller arteries, especially those of the brain, and the development of uremia. The patient should be cautioned not to expose himself to the inclemencies of the weather, to avoid all excessive muscular exercise, and if possible, all mental worry, to keep his bowels open at least once every day, and in every way to favor the action of the skin, so that as little work as possible may be thrown on the diseased kidneys, heart, and blood vessels. The skin, though a poor substitute for the kidneys, is still capable of performing considerable excretory work, and its action should be facilitated as much as possible—by wearing woolen underclothing, and by a daily tepid bath. Hot baths may be permitted, but not indiscriminately; they are contra-indicated if they increase the blood pressure sufficiently to cause unpleasant throbbings. The diet is of the utmost importance, and probably the duration of life depends as much upon discretion in eating and drinking as upon any other factors. It is advisable in many cases to try a more or less exclusive milk diet for a time. If the patient is obliged to take to bed this is all the more indicated. Milk, however, is most distasteful to some patients who will not submit to an exclusive milk diet, even if assured that they will be better on it than on any other diet —which is doubtful. In general it may be said that that diet should be allowed that best promotes a healthy state of the body and mind; a diet free from irritative qualities and readily assimilable; a diet in which the nitrogenous elements are relatively reduced; and a diet sufficiently varied to be attractive. Whether or not albuminous food should be allowed must be decided in the individual case. In some cases it is well to withhold it for a time at least; in other cases moderate amounts may be permitted with good results. Large quantities appear to be injurious to many patients. And it is equally certain that in many cases the exclusion of proteids from the dietary is far from desirable. A wise rule is to permit some of the lean and easily digestible meats to be partaken of once a day. Eggs also are very suitable, and will be found of exceeding service when taken raw (as well as cooked). Tea and coffee, in moderation, and in many cases a little light wine, may be permitted. In many cases the foregoing with an occasional mercurial and saline purge for its depletive effect, and its tendency to lower blood pressure, will suffice to produce amelioration of all the symptoms. If such be the case, no medicines should be given.

When, however, the heart begins to flag, to be no longer equal to the demands, medication is called for, and under these circumstances I know of no better remedies than nitroglycerin and caffein. The nitroglycerin should be given in doses of one minim of the 1 per cent solution, or in tablets of 1-100 grain each, three or four times daily, or more frequently until the desired effects are attained. The caffein may be given in three grain doses at the same time —the only contra-indication to its use being an unpleasant insomnia that it sometime induces. Nitroglycerin not only reduces the blood pressure, but it is said to favor the reduction in the amount of albumin excreted, and it permits the heart still capable of performing its work, to do so unhampered by excessive resistance in the arteries. It is not necessary to give nitroglycerin to the extent of producing unpleasant symptoms; sufficient reduction of the arterial tension is usually produced before this. We have to bear in mind that it is not necessary to reduce the tension to that of the normal individual. A certain amount of increased tension is desirable in renal cirrhosis; for unless there be increased tension, the amount of urine excreted lessens,

and uremia is a likely event. I believe also that the gentle stimulus to the heart produced by the caffein, as well as its diuretic action, tend for good in this disease. It is well to continue this treatment for from four to six weeks, and then to interrupt it for a week or ten days or longer, if the condition of the patient does not necessitate a return sooner. The nitrate of potassium or of sodium may be substituted for the nitroglycerin, but I believe they are less efficacious. Recently good results have been obtained with erythrol tetranitrate. It is well to remember that the nitrites interfere somewhat with the oxygenating power of the blood, and for this reason, if for no other, their continuous administration should not be persisted in too long.

In the absence of cardiac dilatation, drugs such as digitalis and strophanthus, should not be given. But when dilatation does develop it must be combatted actively, for which purpose no drug is better than digitalis, combined sometimes with the alkaline diuretics, or theobromin, or spartein. Strychnin also is a most efficient remedy and may be given with expectation of happy results at any stage of the disease. It is of value not only for its general tonic effect, but it proves especially useful to that heart that shows the slightest embarrassment. The routine administration of iron in these cases is to be deprecated. Iron, however, is useful in cases of marked anemia, but these are the rare cases. The iron should be given in small doses. The prolonged use of the iodides, mercuric bichlorid, or the chlorid of gold and sodium has been recommended. Good results appear to attend their use in some cases, but it is extremely difficult to ascertain just how much good may be attributed to them. They would seem to be indicated in cases associated with marked arteriosclerosis.

The treatment of uremia that may develop in these cases does not differ from the treatment of uremia in general. An attack of acute uremia that shows its imminence by headache, restlessness, foul breath, coated tongue, vertigo, etc., may sometimes be warded off by restricting the diet to milk, giving large quantities of water, venesection, a brisk cathartic, and nitroglycerin and caffein. In some cases, however, cases attended by considerable diminution in the daily quantity of urine and other manifestations of failing cardiac power, digitalis and other diuretics are urgently demanded.*

PATHOLOGY OF GLIOMA OF THE RETINA, WITH CLINICAL NOTES OF A RECENT CASE.

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This case of retinal glio-sarcoma is brought forward on account of the comparative rarity of the disease, and its interesting pathological exhibit. Early in December, 1900, there came to my clinic at the Post-Graduate Medical School, in New York, a boy of thirteen months, whose mother gave the following history: Soon after the birth of the child, the mother noticed an enlargement of the left eye-ball, a blueish gray look of the sclera, a very broad cornea, and a vacant stare. When first observed by her, the eye apparently had sight. After a few months, she sought advice for what seemed to her a sightless eye. Her story was, that she had for six months consulted at nearly

* For a more detailed discussion of the foregoing questions consult the following articles by the author: The Interrelationship between Cardiovascular Disease and Renal Disease, Philadelphia Medical Journal, October 27, 1900; Inflammation of the Kidney (Nephritis, Bright's Disease), Wood's Reference Handbook of the Medical Sciences, revised edition, Vol. V, 1902; The Diagnosis of Chronic Nephritis, Journal of the American Medical Association, Vol. XXXIX, 1902.

every eye clinic in New York, and received, with but one exception, the same advice, viz: that a tumor existed within the eye-ball, that the eye was sightless, and that early removal was necessary. At the age of thirteen months, the appearances were as follows: the eye-ball was 25 per cent larger than its fellow; the cornea was 3 mm. greater in its horizontal than in its vertical direction; the eye-ball showed increased tension; sclera was decidedly blueish; cornea was transparent; pupil was largely dilated, and failed to contract by eserine; the pupillary area was quite well filled with a pink and yellow reflex, having three retinal vessels of good size coursing in a horizontal direction across it. There were no appearances of staphyloma in either of the protecting tunics, and motility in all directions was good. A diagnosis of well developed glioma of the retina was made, and immediate enucleation was advised. This advice was given, as the right, or fellow eye, was apparently free from disease, and as the child was well nourished. As the child was thirteen months of age, and had the proper number of good teeth, the mother was advised to wean it—which advice was followed. After continuing her visits to various other similar institutions, the mother finally consented to the enucleation of this eye, which was accomplished by me without incident in June, 1901; the optic nerve was abscised as far back as the small orbit would allow. The organ was placed in a preparation of formalin, and specimens were made a few months later. Photographs of the patient and of the organ after removal were made. After detention in the Post-Graduate Hospital for five weeks, the wound promptly healed, and the child rapidly improved, but the mother preferred to remove the child to her home, rather than to accept the proffer of a six week's stay at the Country Home of the Babies' Wards at Seacliff, Long Island. Early in September, or three months after the enucleation, the child was returned to the clinic with a proliferation of new growth in the roof and conical depth of the orbit. Not satisfied with the advice to wait two weeks for observation, the mother sought other counsel. I learn that late in September the orbit was eviscerated of its contents by Prof. Carl Beck, at the St. Marks Hospital. On November 29th, the growth had reappeared, invading the orbital roof, when it was again interfered with by the same surgeon, and a portion of the bony roof was removed. The child died the next day, November 30th. Dr. Beck reports the pathological structures of the neoplasm as a round-cell sarcoma—pigmented—with very little connective tissue.

General Remarks.—This was the sixth child of healthy Hebrew parents, and no history of malignant growth of the eye, or of any apparatus of the body could be made out for three generations. Of the other five children, one died in its first year of entero-colitis while the other four had always been unusually healthy. Of these four children, three are hyperopic, two of whom show marked double convergent squint. On one of the two squinting children an operation for the relief of the deformity is under consideration at the present time.

Diagnosis.—Liability to error is easy in the early stages of glioma, especially in the so-called ophthalmoscopic stage, when the mirror brings out quite nicely the granular changes of the retina near the optic nerve.

I. Glioma, or fungus hæmatodes, may be mistaken for plastic deposits lying either in the vitreous humor, or more anteriorly just behind the ciliary body in whole or in parts—and which are the results of slow, subacute, or even chronic cyclitis, or irido-cylitis. In this disease, the pupil is invaded, an abnormal reflex is obtained by the mirror, and ocular tension may be increased. Retinal vessels are, as a rule, absent. Iris and lens may be pushed forward, and detachment of the retina may, or may not, exist, according to the amount of infiltration of the granular layers of the retina. In plastic cyclitis or exudative chor-

oiditis the rule is—the eye is soft, not hard, the iris and ciliary body are hyperæmic, the sclera is infected and the whole picture is one of an inflammatory process. While it is easy to confound this condition with the secondary stage of glioma, it would be a mistake to remove an eye for the inflammatory process alone.

II. Glioma may be mistaken for metastatic choroiditis. But the history and clinical symptoms of a deep-seated inflammation indicate the latter, and not glioma. In addition some antecedent brain lesion, such as a true basilar meningitis, or of both brain and spinal cord,such as a cerebro-spinal meningitis, or of some infectious disease, as a serious blood poisoning, has transpired, of which the metastatic choroiditis is a grave secondary symptom. Glioma may occur in an eye having such symptoms, and may mask the latter: in such an event an incision to relieve the suppurative process would reveal the glioma. One such case has been reported—in which the cornea was in a condition of suppurative ulceration.

III. Cases to whose pathological process the term pseudo-glioma has been given, because the deposits within the eye-ball are the results of previous inflammatory processes, of choroid retina, ciliary processes, or vitreous humor, and which, sooner or later, become gradually absorbed. These deposits may be also the result of a highly emphasized strumous cachexia: in both instances they may run their course in correspondence with a true clinical picture of glioma—with this distinct difference that they do not necesarily eventuate in a gross enlargement of the eye-ball, and destruction of sight. In such cases delay is not dangerous, and the organ should not be removed too early.

IV. White sarcoma of the choroid simulates glioma of the retina, though it does not come usually in patients as young as those who are victims of glioma.

V. Simple detachment of the retina may simulate glioma in the so-called ophthalmoscopic stage, but it does not require an intimate knowledge of the use of the ophthalmoscope to differentiate between them. Retinal detachments show the picture of a beautiful arrangement of blueish-white waves, most often in the inferior section of the eye-ball, which are generally sharply limited by a healthy pink-red retina, or disappear in tightly drawn white filrous lines. Glioma, even of the rare glioma-fibroma type, shows a pulpy mass welling up towards the pupil, with a blueish-gray, or blueinsh-yellow field, giving the visual impression as if the intraocular area was stuffed with a colored ball, whose reflex is not unlike that of a hard billiard ball. In detachment of the retina, the eye has lost intraocular tension: in glioma it has gained it. In detachment there is no pain: in glioma there usually is considerable, although in the case here presented, it was not present.

Lastly.—Glioma of the retina is a malignant tumor, peculiar to infant life, rarely being first observed later than the third year of life, and killing the patient within two years thereafter. It is a granuloma of the inner or outer granular layer of the retina; consists of several round cells, a small amount of intercellular substance, and many blood vessels, distributed in the intercellular substance. It always starts in the retina, and may grow inwards or outwards. When the tendency to growth is outwards, bulging of the globe occurs, until it gives away by pressure—ulceration, metastases occur, and the patient is carried off by maligant infection.

Treatment.—The diagnosis of glioma being made, prompt removal should be insisted upon, even of an eye retaining some sight. There is no other course of procedure. In the removal the attempt should be made to make the optic neurectomy as far back in the orbit as possible. For this purpose the eye should be well drawn forward by strong tooth-forceps,

and the optic nerve should be cut close to the optic foramen. If the neoplasm has entered the proximal cavities, operation is contraindicated.

The following macroscopical and microscopical memoranda were made by Dr. Edgar S. Thomson, Pathologist of the Manhattan Eye and Ear Hospital, to whose laboratory the eye-ball was sent:

The eye, which measured 23mm. from the summit of the cornea to the optic disc, was hardened in formalin, bisected, embedded in celloidin, and sectioned. The gross appearances were those of an extensive retinal neoplasm which was pale grayish-yellow and filled almost the whole of the vitreous chamber. It seemed to extend directly into the optic nerve, which was thicker than normal and of the same color as the retinal growth. The growth was in places thin and necrotic while in others it pushed up in mounds into the vitreous.

The microscopic appearances were as fol: lows: cornea, normal; anterior chamber, deep; iris, densely infiltrated with round cells and very thin and atrophic. It is adherent for fully two millimeters beyond the filtration angle, to the cornea. Ciliary body, infiltrated and markedly atrophic, as was the iris; lens, normal; sclera, normal; retina, entirely lost in the growth, no trace of its original structure remaining.

Choroid, infiltrated with round cells (leucocytes) and much thinned. In a few places the growth has invaded the choroid slightly. Optic nerve, infiltrated by the growth as far back as where it was divided.

Growth; springs from the retina and has pushed forward into the vitreous. It is composed of small round cells with large nuclei and is very vascular. The peripheral portions, (near the choroid), are necrotic and stain poorly. There are no spots of calcareous degener but a great deal of pigment which ells in small particles, and in larger masses between the cells. This pigmentary degeneration is confined to the necrotic portions of the tumor. The blood vessels are full of blood and in places the walls are somewhat thickened. The central portion is well nourished and stains well. It extends directly into the optic nerve, spreading along the nerve fibres in the usual manner. The lymph spaces of the nerve sheath are not infiltrated. In one place, beneath a choroidal nodule, the tumor cells extend along a posterior ciliary vessel, passing almost entirely through the sclera.

Diagnosis.—Glioma retinae.

Prognosis.—Absolutely bad.

Remarks.—The microscopic appearances indicate a rather advanced stage of glioma with secondary glaucoma and inflammatory infiltration of the iris and ciliary body. The central part of the tumor is the "youngest" and the infiltration of the optic nerve must have occurred later than any other infiltration. Local recurrence and invasion of the brain are almost inevitable.

Suprarenal Extract in Pneumonia.—It is now generally admitted that the internal administration of suprarenal extract increases the blood pressure, some believing that its effect depends upon constriction of the peripheral blood-vessels, while others contend that it directly stimulates the heart. E. A. Gray (*Med. Rec.*, April 5, 1902), having observed the rapid work of this drug in stopping pulmonary hemorrhage, was led to use it in cases of senile pneumonia. He obtained such favorable results that he has been led to believe that the drug is a valuable heart stimulant, which may be advantageously employed in pneumonia where there is impending heart failure and impeded pulmonary circulation with co-existing renal inflammation. Increased peripheral blood-pressure does not seem permanent.—*The Medical News.*

THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF VERMONT.

By H. Edwin Lewis, M. D., Burlington, Vt.

Every graduate of a learned institution is interested in the growth and progress of his Alma Mater. This is particularly so in regard to the medical graduate—for his standing in any community is defined to a certain extent by the known standards of the college from which he obtained his diploma. If his college is high class and recognized as a substantial, modern institution for medical teaching, he is able to point to its diploma with pride, as an ample testimonial to his fitness for medical practice. If his Alma Mater is an insignificant institution, known for its easy requirements, indifferent advantages and the number rather than the quality of its graduates, his prestige will suffer accordingly wherever he may be placed.

This article, therefore, is instigated by a desire to show the just pride and satisfaction with which every graduate of the University of Vermont Medical Department can point to his Alma Mater. This institution is one of the oldest in the United States, regular lectures first having been given in 1809 by Dr. John Pomeroy, who can really be said to have been the Father of the University of Vermont Medical Department. In 1836 the Department of Medicine was discontinued for lack of students, but was re-organized in 1854 and has been in continuous operation ever since. Dr. S. W Thayer and Dr. Walter Carpenter were most prominent in the reorganization of the department and the successful basis on which it was established was due largely to their enthusiastic efforts. Many obstacles were met in the earlier days but how well they were overcome is shown in its splendid work and the success obtained during the last quarter century. For many years the University of Vermont Medical Department, has had an enviable reputation as a sound, substantial, and distinctly modern medical school. Some of the most famous teachers of the country have been connected with the institution, and the large number of students who have taken the full courses each year has well shown its popularity. Never in its history has the school been called an "easy one" to graduate from, and many a man who has come up for final examination can testify to the rigidness and scope of the questions he was called upon to answer. In every way the diploma of the University of Vermont, Medical Department, has been a coveted honor, and the man who has obtained it in the past has paid the price of hard work and painstaking study, just as much as have the graduates of this year's class.

But the graduate of over five years' standing would hardly recognize the methods in vogue at present. Not that the course as given in the past has been lax or indifferent, but the progress of medical science has developed many new branches and as a consequence the curriculum has been broadened and made much more complete. In accordance with the modern trend of medical teaching, the four year graded course of study has been established and this means much to the student of medicine. Instead of all matriculates repeating the same lectures and studies year after year until they graduate, each year's class has a definite amount of work, consisting of lectures, recitations, and laboratory work which has to be satisfactorily completed before he can pass on to a higher class. This insures a thorough grounding in the fundamental principles of medical science, and leads a student up to his last year's work well equipped to observe, understand and deduct from the clinical knowledge imparted to him. In this way he is taught to apply what he learns and realize its importance step by step.

In regard to clinical advantages while the University of Vermont Medical Department has always had an abundant supply of material, to-day there is more than ever and it certainly is utilized in a far more systematic manner. In fact the opportunities for clini-

The Medical College Building,
University of Vermont.

cal study are as great as any student can or should utilize. Every week throughout the course there are six regular clinics and from two to four each week on special subjects like gynæcology, nervous and mental diseases, genito-urinary surgery, orthopedic surgery, dermatology, venereal diseases, pediatrics, etc, etc. No student is expected to attend the clinics until he has finished his first two years' work and is competent to understand what he sees.

The laboratory courses have also been elaborated until there is hardly a medical college in the country where a student can better obtain the essentials of laboratory knowledge than in the University of Vermont, Medical Department. Whereas a few years ago laboratory work was limited to urinalysis and dissections, to-day there are unusually complete and well equipped laboratories for chemical, histological, physiological, pathological and bacteriological study as well, and work in them is compulsory for every student.

A few years ago the bulk of the work was done by seven professors and a few adjuncts. To-day the teaching force numbers seven regular professors, eleven professors of special subjects, four adjunct professors, nine instructors, and five laboratory instructors,—a faculty of thirty-two men.

The entrance requirements have also been raised and while a student may enter the medical department with one or two conditions he cannot pass on to his second year's work until they have been removed. So it is with each year's work. It must be completed in a manner satisfactory to the Faculty or repeated. A student who fails to maintain a satisfactory standard at the close of the term in the studies of any year, is given an opportunity to clear up his work at the beginning of the next term, and unless successful is obliged to take the year or study over again as directed by the Faculty. This is eminently fair to the student and weeds out of each class the incompetent or lazy.

The new method of marking is vastly superior to the old. Previous to the last year or so, a student was measured entirely by his final examination. In many instances this was a real hardship, for many good students are unable to pass creditable examinations or demonstrate their actual knowledge under the excitement, embarrassment, or anxiety of a final test. Nowadays each student works out his salvation during the whole term and he does not have to stand to win or lose on one examination. He receives a mark for every recitation and every two months is given a test which not only counts as one recitation, but also gives a mark for such recitations as he may have been absent from. At the end of the term his recitation marks are averaged and this counts for fifty per cent of his final mark. The other fifty per cent is derived from the mark obtained in his final examination. Thus the standing of a student rests entirely on his own labors. If he does good work and attends to business there is little or no excuse for not obtaining a good and sufficient final mark when the result of both his term's work and final examination in each subject are added together. This is much fairer than the old system and any student who enters the fourth year with a clean record ought to pass along to his final examinations without a particle of the old time fear and trembling.

The progress that has been made during the past decade has been very substantial and the Medical Department of the University of Vermont was never on a better or surer footing than it is to-day. This year there have been 209 students in attendance. This number is not so large as in 1896, 1897 and 1898, for the attendance in these years was augmented by the rush of students desirous of getting in under the three year course, and 1898 was the last year in which they could do so. But it is an interesting fact that this year's attendance is larger by six than the average for the past ten years.

In every way the Medical Department of the University of Vermont is justifying the highest respect of its alumni and winning substantial recognition all over our country. The diploma of the school is fully recognized by the Regents of New York State whose laws are probably the most stringent of any in the country.

The alumni of the school are numerous, spread not only over the United States but all over the world. Not only in private practice, but in the army, navy, merchant marine, marine hospital and in every branch of medical science, there are doctors acquitting themselves like men and heroes who have studied within the walls of the University of Vermont, Medical Department, come up for final examinations, waited anxiously for the "old white horse" that never came, and in all the pride of successful graduation have gone out into the world to play their parts, and contribute their share in the relief and betterment of mankind.

Our Alma Mater is not perfect, but what is there on earth that is? That the Medical Department is moving forward each year, growing better and stronger, accomplishing its mission and proving its usefulness is enough to warrant the loyal support of all alumni. The obstacles and vicissitudes through which it has passed and through which it will have to pass are nothing, as long as the general movement is onward and upward. It is too big an institution to falter, and as the years glide by into the shadows of the past and each one who has contributed their share to its success as teachers or students pass on to that realm from which no traveler returns, the grand old University of Vermont, Medical Department, will go on to higher and nobler attainments in the interest of medical education and the welfare of the people. In the words of Goldsmith:

"As some tall cliff that lifts its awful form
Swells from the vale and midway leaves the storm,
Tho' round its breast the rolling clouds are spread,
Eternal sunshine settles on its head."

GALL-STONES AS A SURGICAL AFFECTION.*

By S. H. Weeks, M. D., Portland, Me.

Mr. President and Members of the Vermont Medical Association:—

The first duty I have to perform in appearing before you is a very pleasant one, that is, to thank you most sincerely for the honor you have done me, in extending an invitation to present a paper at this meeting.

As your secretary was unwilling to assign any subject, I have chosen as the topic of this paper, "Gall-Stones as a Surgical Affection." I think I need not offer any apology for choosing this subject, for its importance is very great, as every member of this association well knows. At the outset I think it may be well to call attention to a few anatomical points, a knowledge of which will aid the surgeon in his operations upon the gall-bladder and its ducts. It is important that the surgeon should understand the relation of the gall-bladder, common, hepatic and cystic ducts, with the portal vein, vena cava, and hepatic artery.

The direction of the portal vein, hepatic and common ducts, and the hepatic artery is the same, from the great fissure of the liver downward and toward the median line. The common duct, receiving the hepatic and cystic ducts about two inches from the great fissure of the liver, proceeds in an almost straight line to its communication with the posterior surface of the duodenum. In the beginning of its course the common duct lies directly in front of the portal vein.

Inferiorly, the common duct crosses the inferior vena cava at an acute angle before it enters the head of the pancreas.

The relations of the gall-bladder to the surrounding structures are usually shown at the post mortem examination by the staining of

* Read by invitation at the 88th Annual Meeting of the Vermont State Med. Society.

bile. When distended, the gall-bladder is in contact with the abdominal wall in front, with the liver, the hepatic flexure of the colon, or a portion of the transverse colon, with the duodenum and often with the pylorus. It is therefore, possible to make a communication between the gall-bladder and the colon or the duodenum. This operation will, however, depend upon the size and mobility of the gall-bladder, as well as upon similar conditions in the duodenum and colon.

To Dr. Morris H. Richardson of Boston we are indebted for a description of this region, which is based upon twenty or more dissections made at the Harvard Medical School. I quote from his description of this region: "Just to the right of the rectus muscle, opposite to the tip of the cartilage of the tenth rib, the abdominal wall consists chiefly of skin and fascia. The right upper quadrant of the abdomen, containing the liver, gall-bladder, and portions of the kidney, stomach and duodenum are separated from the peritoneal cavity below, by the transverse and ascending colon and their mesentery. The colon is usually in contact with the abdominal wall from the ileo-cæcal valve to the splenic flexure. Extravasations will be immediately opposed by this intestinal and mesenteric barrier, which may, however, be avoided by traveling downward along the right border of the ascending colon." The hepatic, cystic and common ducts all lie in front of and directly upon the great portal vein. Near its junction with the pancreatic duct the common duct lies upon the vena cava, hence much caution is needed in incising the walls of these ducts not to cut through them.

In the neighborhood of the neck of the gall-bladder, the duodenum occupies the floor of what may be called the sub-hepatic space, and the pyloric end of the stomach usually intrudes itself on the medium side, so that, if inflammatory adhesions are formed, the pylorus is very apt to be bound to the parts.

The gall-bladder is entirely covered by pertoneum except at its posterior surface. In some cases a fold extends from its lower portion across the foramen of Winslow, to become expanded upon the duodenum; in other cases there is a reflection from the under surface of the great lobe of the liver itself to the duodenum; in others this fold is absent. In such cases the peritoneum extends to the kidney, covering the anterior surface of the organ; thence it is reflected over the inferior cava to the vertical portion of the duodenum. These folds are of great importance in operations upon the common duct and upon the duodenum. A vertical incision, carefully made so as to avoid the subjacent vessels, followed by digital separation, permits the exposure of the head of the pancreas and under surface of the duodenum, with the whole length of the common duct and its outlet through the duodenal mucous membrane. These folds are exposed with the foramen of Winslow, duodenum and kidney, by drawing the stomach, transverse colon and duodenum down and toward the left. If the body is placed in the erect position the intestines fall and leave the space free. For this purpose the Trendelenburg table reversed is of great assistance. The peritoneal folds thus briefly described are of great importance in operations upon the cystic, hepatic and common ducts, and upon the head of the pancreas and the posterior wall of the duodenum.

Causes.

It is said that three-fourths of the cases of gall-stones occur in women, most frequently between the ages of thirty and sixty. Sedentary occupations, particularly when combined with over indulgence in eating, seem important factors. The subjects are often stout, and usually fond of starchy and saccharine food. The conditions which induce lithic acid also favor the development of gall-stones. Tight lacing is regarded by Marchand as an important factor in retarding the flow of bile. Pregnancy has a similar influence. It has been stated that ninety per cent of women with gall-stones have borne children.

In this connection, it is important to observe that the degeneration of the epithelial cells and abundant mucous secretion of the glands with which the gall-bladder is liberally provided, play an important part in the development of gall-stones. The gall-bladder is a reservoir merely serving to store the bile and allow of its gradual discharge into the duodenum. It is somewhat difficult to reconcile the apparent superfluousness of the bile with its necessary storage. The horse and some other animals have no gall-bladder, and to all appearances it is of little use in man. When it is entirely removed his digestion and nutrition go on quite as well. The absence of bile from the intestines, as in cases when it is entirely removed by external fistula, is consistent with good health. Indeed, when re-absorbed into the system it is a distinct poison, being, according to Bouchard, nine times as poisonous as urine. It is claimed that the liver may form bile enough in eight hours to be fatal if it is all absorbed. It would seem to be almost wholly excrementitious. Physiological experiments seem to show that it is in some way a slight but unnecessary aid to the pancreatic secretion in emulsifying fats. About one pound is daily excreted. Patients discharging all the bile externally, as a rule, notice no difference in their daily health or bowel function, unless it be an occasional tendency to flatulence, which may be corrected by the administration of dried ox-bile in ten grain doses after each meal. The development of gall-stones seems to depend on crystallization of the excess of chlorestin and bile salts, possibly due to temporary stagnation of the bile and absorption of water by the walls of the gall-bladder, possibly to a catarrh of the mucous membrane, or as Mayo-Robson calls it, a desquamating angiocholitis. As far as is known at the present time, the causes are three; stagnation, a morbid state of the epithelium, and the presence of micro-organisms. The calculi vary very much in size and number. It is not infrequent to find one or two hundred of the size of bird shot, but by far the most are those containing from one to ten, varying in size from a chestnut to a walnut. In hardness they vary also, from being so soft when of pure cholesterin as to be easily crushed in the fingers, up to the hardness of a vesical calculus, in which case there is an admixture of lime salts, precipitated by inflammation. It is claimed that on an average one person in ten is affected. The great prevalence of gall-stones is shown by post-mortem statistics, which reveal their presence in vast numbers of people having no previous suspicion of their existence. They are much more common in advanced age, so that after sixty, one person in six is affected.

The microbic theory of gall-stones, which was promulgated two years ago, is now an established fact. It is probable that the micro-organisms favor the precipitation of certain elements of the bile, but the microbes cause a catarrh, which may not be recognized clinically. The degeneration of the epithelial cells produces the cholesterin and lime.

Lithiasis is a result of the infection of the whole biliary tract or of the gall-bladder alone.

Calculi may be divided into two classes; those produced by the colon bacillus, and those by the typhoid bacillus. The colon bacillus is the most frequent cause. The presence of aseptic foreign bodies in the gall-bladder does not produce inflammation and does not seem to affect its function, if the cystic duct remains potent. There is no precipitation of cholesterin when the bile remains clear and free from microbes.

Bile, stagnant in an aseptic gall-bladder, has no tendency to precipitate. It is probable that the micro-organisms find their way into the gall-bladder through the duodenal opening of the common bile-duct. The possibility of entrance through the blood vessels must be allowed, but has not been proved.

Symptoms.

The gall-bladder may be distended by stones, the patient being unconscious of their exist-

ence until one attempts the passage of the cystic duct. Then begins the distress, which is extreme. The muscular coat of the duct grasps the stone, and active peristalsis of the entire canal and wall of the gall-bladder begins.

This irritation causes increased secretion and the additional fluid poured into the gall-bladder adds a "Vis a tergo" which ends in expulsion. The ducts are capable of great dilatation; while usually they are the size of a small quill, they may become so dilated as to admit the index finger. A stone as large as the end of the thumb may be found in any part of the canal. Rokitansky records one the size of a pullet's egg, which he found half extruded into the duodenum. Nature is not always successful in her efforts to get rid of the calculi by the natural route, and in her expulsive efforts a relatively large number of patients die.

In a large number of cases, a pathological change is seen, which by nature's provision accomplishes by another route that in which she would fail if the attempted expulsion by the papilla were persisted in The process is inflammation and ulceration by which the wall of the canal is penetrated by pressure of the stone, and, having time to seal itself by plastic adhesion to a neighboring organ, penetrates that also, and discharges the stone into the duodenum, stomach or colon. Unfortunately this beautiful scheme sometimes miscarries, and the discharge takes place into the peritoneal cavity, sacrificing the life of the patient; not always, but usually. In one of my patients I found a large abscess in the subhepatic space, and at the bottom of the abscess cavity I found a large gall-stone, which had escaped from the gall-bladder by inflammation and ulceration. This abscess was above the traverse colon, and was shut off from the abdominal cavity below by adhesive inflammation. The stone was removed, the abscess cavity washed out and drained, and my patient made a rapid recovery. The symptoms which characterize the passage of a stone can be almost predicted when one considers the anatomy o fthe parts. The outset is almost always sudden. Intense pain seizes the patient under the right rib, often shooting through to the shoulder blade; nausea, vomiting, fainting and sweating ensue. The pain abates and returns, and paroxysms compel the patient to double up with pain. There is no fever. The attack continues from half an hour to two days, but as a rule, is ended in twelve or twenty-four hours. I think it is safe to say that, with few exceptions, all frequent attacks of pain which are felt beneath the right lower ribs and attributed to indigestion, are due to the passage of very small gall- stones, of which post-mortems reveal so many unsuspected cases. Too much emphasis cannot be placed upon the absence of acute colic at the outset of a slow, advancing jaundice as indicating malignant or inflammatory obstruction. The surgeon is more especially interested in cases of constantly recurring attacks, which call for operation, either because of frequency, severity or disablement. When is a gall-stone hopelessly impacted so as to require operation, is a question of less importance now than in the past. The surgeon does not do his duty by the patient if he waits until he is nearly exhausted by his sufferings. The results of the operation are so uniformly good, and free from danger in uncomplicated cases, that to wait is only to invite complications. We can never be sure that the last stone has passed after three or four attacks, and we may now place the operation in the interval, or during an attack, on as high a plane of safety as that for appendicitis.

Diagnosis.

The presence of jaundice in any patient should always lead the physician to consider what the possibilities are of surgical complication. The physician must keep in mind that the almost total arrest of the outpouring bile at the common duct, or through one of the main branches of the hepatic duct, is necessary to produce jaundice. What is the surgical import of cholemia? The history of many patients with grave disease of the liver shows no

jaundice, or only a mild show of icterus late in the trouble. It cannot be considered as pathognomonic of, or constant in, any but the gravest obstruction of the common duct. There are chronic gall-stone obstructions, cancer, suppuration and cholangitis; on the other hand, it is the most uniform accompaniment of simple catarrhal duodenitis extending into the duct.

Too much emphasis cannot be laid upon the very slight phases of jaundice in cases of invalidism, as it is by the early recognition of such grave troubles that surgery may step in and save life.

The gravest hepatic diseases coming under the surgeon's care may be entirely free from cholemia, especially in the early stages. The X-ray is of no value whatever in cases of gall-stones as a means of diagnosis. The presence of grave chronic jaundice has been regarded by some as a contra-indication to operation, or at least as a desperate complication. It has been held that capillary hemorrhage is very apt to occur a sa dangerous sequel.

In some of my cases there was chronic cholemia which had existed for a long time, and yet there was no tendency to hemorrhage. In some cases the blood has a slippery or soapy feeling on the fingers from saturation with bile salts.

If we take into consideration the symptoms which have been enumerated as characteristic of gall-stones, there cannot be much doubt in the matter of diagnosis.

Prognosis.

The presence of calculi in the gall-bladder is not of so much importance when they do not give rise to any pronounced symptoms, but in all cases they are to be looked upon as foreign bodies which may at any time give rise to dangerous symptoms. When phlegmonous inflammation of the gall-bladder takes place, the prognosis is grave.

Biliary colic is not always free from danger. Some cases of death from heart failure have been recorded. Distended gall-bladder from calculous obstruction of the cystic duct, when accompanied by elevation and irregularity of temperature, with local pain and tenderness, suggests the possibility of suppuration. Cholecystitis may result in rupture of the gall-bladder or in general septicæmia. Both conditions usually terminate fatally.

Hepatic and perihepatic abscesses are grave conditions. The prognosis of jaundice depends on the amount of obstruction and the previous health of the patient. If the jaundice is intermittent, or remittent, as in the case when a calculus floats in an enlargement of the common duct, the danger is not great, because the system will eliminate the poison in the interval. If the patient has poor health or if the kidneys are diseased, a moderate amount of jaundice may prove serious.

The grave symptoms of jaundice are a slow pulse, lethargy, and the occurrence of hemorrhage through the mucous membrane or into the tissues.

The prognosis of cholelithiasis is much more favorable since the development of hepatic surgery, and the experience of the last two or three years would seem to indicate that it is possible to remove calculi in the most difficult cases with comparative safety, if the patient be not allowed to become too much poisoned by the toxins of bile and by those resulting from membranous infection.

(*Continued in July number.*)

Gleam of Light.—A woman in a tattered shawl rang the bell of a stately mansion.

"May I die on your doorstep here?" she asked, respectfully, of the butler who presently appeared.

"No," was the brusque reply.

The woman was turning sadly away when a beautiful child with golden hair cut in:

"Oh, papa," cried the child, "please do let the woman die on the doorstep."

"Very well," said the father, for he could deny his little daughter nothing.

So the woman died on the doorstep, feeling that the world was not altogether dark after all.—*Detroit Journal.*

THE SIGNIFICANCE OF ADENITIS IN INFANTS AND CHILDREN.

By Godfrey R. Pisek, M. D.
New York City.

Professor of the Diseases of Children, Medical Department, University of Vermont; Attending Physician Babies' Wards, N. Y. Post-Graduate Hospital and Medical School.

Mr. President and Gentlemen of the Burlington Clinical Society:

In practice we constantly have children brought to us with an enlargement of some group or chain of glands, and it will be the purpose in this brief paper to point out the relation they bear to diseased conditions and their possible effect on the viscera of the delicate child organism.

Clinically the lymphatic glands are of great importance; their function being to guard the circulatory system since they are obliged to take up, destroy, neutralize, or at least hold in abeyance the numberless bacteria which block their channels, and it is only when overwhelmed and overpowered by these germs that they themselves become affected.

Recent investigations along these lines have sufficiently proved that inflammation of the lymphatic glands is due to absorption, from a more or less distant focus, of bacteria or their toxins.

Accepting the, as yet, crude classification of inflamed glands into acute, chronic and tubercular, we find that the glands most frequently affected are the cervical, mesenteric, axillary,inguinal, bronchial and mediastinal and it is these groups we wish to consider.

That the majority of children with enlarged glands have cervical adenitis, is accounted for by the delicate epithelium of the skin of the face and neck and the equally delicate mucous membrane of the mouth and the pharynx. These being largely exposed to irritations, to bacteria, and to traumatism, we find the glands easily overpowered. It is our duty always to seek the cause or focus of the trouble and if possible to remove it. By so doing we will be well along toward curing our little patient.

Remembering that the superficial glands drain the side of the head and neck, face and external ear, and that the deeper glands drain the mouth, tonsils, palate, pharynx and larynx, we have a clue to the initial trouble. It is not to be forgotten that the primary focus may have cleared up or may have been apparently cured and forgotten, but still the glands remain enlarged. A careful history of the eruptive and infectious diseases; any irritations of the scalp, diseases of the ear, eyes, nose, throat, gums, teeth or diseases of the throat, must be obtained.

It is the aim of this paper to emphasize the importance of working backwards from the effect to the cause in these cases. How could we cure a glandular enlargement due to pediculi which we remove and then fail to find the ova or nits that remain? Occasionally there seems to be no apparent cause except anaemia and debility for glandular hypertrophy, but here again we have a valuable clue to the treatment. The glands have shown us how weak are the resisting powers of any particular child and we must work energetically to restore the patient to full vitality.

Again we may have a cervical adenitis in a child who seems well nourished and otherwise healthy. They show no acute inflammatory changes, grow steadily and surely, and do not easily break down. We may or may not get a history of tuberculosis in the family. By a process of exclusion then and from the statistics obtained from examinations of these glands for tubercle bacilli we are justified in saying the glands are tubercular. Such a condition by no means signifies that the child has tuberculosis, although having once given entrance to these germs the possibility of an extension is before us and surgical intervention is indicated. Some authorities condemn removing these so-called valuable glands thus

* Read before the Burlington Clinical Society and Chittenden County Medical Society, April 25, 1902.

destroying their function, forgetting that even under the best conditions of resolution the virulent germ is ever ready to spring into renewed activity. It is conceded that the cervical glands may infect the thoracic chain and infect the lungs.

Passing now to the glands of the thorax, we find a field as yet only partly explored. Thoracic adenitis is in greater part of the chronic type and unfortunately only too often are they tubercular. Loomis has examined and found the tubercle bacillus in apparently normal glands. We may safely say that in a larger proportion of tubercular cases in children it would appear that the primary infection was in these structures and that contrary to Parrot's law ordinary clinical experience shows that the glands may be involved without local lesions in the lungs.

In a large number of autopsies in children, we have found the mediastinal and bronchial glands enlarged, sometimes pressing on the great vessels or against the bronchial tubes. In one case perforation of a cheesy bronchial gland into the adjacent lung was the cause of death. We cannot describe any definite symptoms invariably produced by these pathological glands, but occasionally we do get localized feeble breathing with sibilant rales due to compression of a bronchus. Percussion is unreliable for the dullness may be due to the thymus. Recurrent attacks of bronchitis may, however, often be traced to hypertrophied lymph nodes in the thorax. The enlarged mesenteric and retroperitoneal glands of the abdominal cavity may alone give sufficient evidence of the old fashioned tabes mesenterica. The point of entrance of the offending germs in these cases being through the mucous membrane and the intestinal canal. If we find a general enlargement of the glands all over the body—a condition which Legrouz called microadenopathy, we have a valuable hint in doubtful cases of general tubercular infection. On the other hand, the absence of hypertrophied lymph glands and the enlargement of liver and spleen is an important negative sign in chronic diffuse tuberculosis, provided we can rule out syphilis by the history of skin rashes, fissures, and the therapeutic test; for here also we may have enlargement of the superficial glands.

Thus we see that the glands may help us to establish a correct diagnosis; they may point out by their anatomical distribution the source of their infection, or they may themselves be productive of pathological conditions in adjacent viscera.

SPECIAL THERAPEUTIC ARTICLES

A CONTRIBUTION TO THE THERAPEUTICS OF ANAEMIC CONDITIONS,

By Dr. Hermann Metall.
Assistant Physician to the General Polyclinic, Vienna.

(*Translated from the German.*)

In the medical treatment of the various forms of anæmia, whether it be essential chlorosis or the so-called secondary forms arising from severe loss of blood and various diseases (tuberculosis, cancer, etc.), iron has always occupied the most important place. In the management of chlorosis, especially, the chief object is the administration of an adequate quantity of iron, since upon this depends the success of all treatment. As to the manner in which iron acts in anæmic conditions, that is a secondary matter. Whatever be its mode of action, it remains an empirical remedy and yet one of incontestable value.

According to the unanimous opinion of many authors the effect of iron in chlorosis cannot be replaced by alimentation. Reinert, Klein, Immermann, Ensli, and others have shown that typical chlorosis cannot be cured in any other way, even by forced feeding. Some of them have made a series of very careful experiments for this purpose, and reached the remarkable result that during superali-

*Medicinisch-Chirurgisches Central-Blatt, Vienna, Austria, January, 1902.

mentation, extending even over a number of weeks, the quantity of hæmoglobin in the blood increased scarcely a few per cent, and remained permanently at this level. That this is actually so we daily convince ourselves in cases of chlorosis in girls of the better classes. These girls, if placed on a full diet, accumulate more fat, while the chlorosis remains practically unaffected—it requires iron. The dietary therefore plays a subordinary part in the therapy of chlorosis (Klein), and is to be regarded only as an important adjunct to the treatment.

I will now devote a few words to maganese, which is employed in combination with iron in some ferruginous preparations for the treatment of anæmia. Hannon already directed attention to this metal, which is a constituent of healthy blood, and which besides iron has an important bearing on the absorption of oxygen by the blood. In fact, experiments have shown that anæmic conditions are mos successfully treated with iron in connection with manganese. Chalybeate medication is materially aided and promoted by the addition of manganese. Efforts have therefore been made to introduce combinations of iron and manganese into therapeutics.

After laborious attempts, Dr. Gude, chemist, succeeded in producing such an iron-manganese preparation, which is easily absorbed by the entire intestinal tract, evokes no concomitant effects, and, as is illustrated in the following histories of cases, has proved an excellent remedy for the formation of blood. The preparation referred to is Pepto-Mangan (Gude). It contains iron and maganese in an organic combination with peptone, and is a clear fluid, resembling dark red wine, of an agreeable non-metallic, non-astringent taste.

The advantage of this preparation is that it exerts a stimulating effect upon the blood-forming organs, these being excited to greater functional activity, and that the favorable effect manifests itself even within a short time by an increased oxygenation of the blood. At the same time, this chalybeate, as already mentioned, causes no digestive disturbances and does not injure the teeth.

In regard to the daily dose of iron, Quincke maintains that it should range from ¾ to 1½ grains of Fe. Most clinicians prescribe commonly 4 grains, which considerably exceeds the maximum dose recommended by Quincke. Some of them, like Niemayer and Trousseau, give even 7 grains of metallic iron daily; hence Pepto-Mangan (Gude) should be prescribed in doses of one tablespoonful three times daily for adults, and one teaspoonful twice daily for children up to twelve years, after meals. Sour, fatty foods and red wine should be avoided during its administration. The preparation is much relished by all patients, and it is my custom to administer it to children in water, or, better, in cold milk with the addition of sugar, in which form it is very palatable.

After this brief introduction I will describe a number of cases which have been treated by me with Pepto-Mangan:

Case I.—Mary B., 16 years old, has complained since a week of general debility and lassitude. She is very pale and restless, has no appetite, and suffers from headache and a feeling of pressure in the stomach. She is constipated, and the menses are irregular. Diagnosis, chlorosis.

Date.	Red blood Cells in cubic millimetre.	Haemoglobin per cent.	Bodily weight.	Therapy.
Aug. 2	2,480,000	20	49.2	Pepto-Mangan (Gude), one tablespoonful three times daily.
Aug. 9	3,212,000	25	50.	
Aug. 16	4,020,000	30	50.5	
Aug. 24	4,300,000	40	51.3	
Sept. 2	5,000,000	50	53.4	

After a week, the appetite was good, no headache; at the end of the second week, no further disturbances; menses not painful, and lasting only three days (formerly five days). After four weeks, the patient discharged cured.

Case II.—Anna H., 23 years old, has suffered for three years from chlorosis, with irregular menstruation, palpitation of the heart, a feeling of weakness, and occasional syncope. Physical examination showed the presence of anæmic murmurs over the heart, as well as a venous murmur; no fever or œdema.

Date.	Red blood Cells in cubic millimetre.	Haemoglobin per cent.	Bodily weight.	Therapy.
Aug. 1	3,750,000	35	55.5	Pepto-Mangan (Gude), one tablespoonful three times daily.
Aug. 29	4,010,000	60	57.8	
Sept. 11	4,200,000	70	59.	

Appearance of menses after absence of 12 weeks; subjective disturbances have disappeared.

CASE III.—M. W., 16 years old, has suffered since a year from headaches, dyspnœa, tinnitus aurium, vertigo, and gastric disturbances. There was marked pallor of the face and of the mucous membranes; systolic murmurs over the mitral and pulmonary valves, with dilatation of the heart. No fever; spleen not palpable. Diagnosis, severe chlorosis.

Date.	Red blood Cells in cubic millimetre.	Haemoglobin per cent.	Bodily weight.	Therapy.
Aug. 5	2,250,000	25	52.5	Pepto-Mangan (Gude), one tablespoonful three times daily.
Aug. 13	3,200,000	30	53.5	
Aug. 16	3,350,000	35	55.5	
Aug. 23	3,530,000	40	56.5	
Sept. 1	4,250,000	45	58.	

The subjective symptoms rapidly subsided, the appetite improved, and the stools became regular. The menses reappeared in the second week of treatment after having been absent for a year.

CASE IV.—M. P., 15 years old. Menses absent since one-half year; always scanty. Vicarious hæmorrhages from the nose. Since three months the patient has suffered from dyspnœa, vomiting, cardiac palpitation, general weakness, headaches, feeling of dulness and sleeplessness. Physical examination reveals anæmic murmurs, moderate dilatation of the heart, venous murmur.

Date.	Red blood Cells in cubic millimetre.	Haemoglobin per cent.	Bodily weight.	Therapy.
Aug. 5	2,400,000	20	47.	Pepto-Mangan (Gude), one tablespoonful three times daily.
Aug. 10	3,600,000	25	47.5	
Aug. 16	3,850,000	30	48.5	
Aug. 23	4,250,000	35	49.0	
Aug. 31	4,700,000	40	49.7	
Sept. 7	5,000,000	45	52.	
Sept. 14	5,200,000	50	53.	

After the first week improvement set in; at the end of treatment disappearance of all disturbances. Increase of bodily weight, 12 pounds.

CASE V.—J. K., 18 years old. Chlorosis. Anæmic murmurs, cardiac dilatation, loss of appetite, insomnia, general lassitude, and headaches.

Date.	Red blood Cells in cubic millimetre.	Haemoglobin per cent.	Bodily weight.	Therapy.
Aug. 10	2,200,000	35	52.	Pepto-Mangan (Gude), one tablespoonful three times daily.
Aug. 24	3,000,000	45	55.	
Sept. 12	3,300,000	60	57.	

At the end of the first week appetite vigorous; headaches had subsided. At the end of the fourth week no disturbance of any kind.

CASE VI.—A. N., 19 years old, has suffered from chlorotic disorders since two years. Improvement occurred under a milk diet and a sojourn in the country. Since five months the patient again complains of disturbances: palpitation of the heart, lassitude, headache, vertigo, tinnitus, and constipation; anæmic murmurs and venous hum perceptible.

Date.	Red blood Cells in cubic millimetre.	Haemoglobin per cent.	Bodily weight.	Therapy.
Aug. 17	4,500,000	25	53.5	Pepto-Mangan (Gude), one tablespoonful three times daily.
Aug. 25	4,100,000	30	54.	
Aug. 31	4,000,000	35	54.5	
Sept. 7	3,950,000	40	56.	
Sept. 22	4,200,000	45	57.5	

The subjective symptoms diminished after a few days. The disturbances disappeared, the appetite improved, and the stools became regular.

CASE VII.—J. R., 20 years old, has suffered from chlorosis since two years. Status præsens: General lassitude, palpitation of the heart, a feeling of pressure in the stomach, difficulty in breathing; menses irregular as well as dysmenorrhœa. In the last three months all the disturbances have become more intense.

Date.	Red blood Cells in cubic millimetre.	Haemoglobin per cent.	Bodily weight.	Therapy.
Aug. 22	4,250,000	30	52.	Pepto-Mangan (Gude), one tablespoonful three times daily.
Aug. 26	4,350,000	35	52.5	
Sept. 5	5,420,000	40	53.5	
Sept. 12	5,300,000	50	54.	
Sept. 18	5,350,000	55	54.5	
Sept. 27	5,300,000	60	55.5	

The disorders have disappeared, the appetite is good, and the bowels regular; no anæmic heart murmurs.

CASE VIII.—L. N., 19 years old, complains of headaches, cardiac palpitation, vertigo; scanty menses.

Date.	Red blood Cells in cubic millimetre.	Haemoglobin per cent.	Bodily weight.	Therapy.
Aug. 23	2,500,000	40	54.	Pepto-Mangan (Gude), one tablespoonful daily.
Sept. 13	3,750,000	55	55.5	
Oct. 1	4,300,000	70	57.	

The subjective disorders have vanished; menses more abundant.

CASE IX.—J. M., 16 years old, has suffered since two months from palpitation of the heart, dyspnœa, feeling of pressure in the stomach, vertigo, tinnitus, and headaches. There is a slight cardiac palpitation, with systolic murmurs and a venous hum. Anorexia and constipation are present. The menses have been irregular since a year.

Date.	Red blood Cells in cubic millimetre.	Haemoglobin per cent.	Bodily weight.	Therapy.
Sept. 2	4,500,000	35	50.	Pepto-Mangan (Gude), one tablespoonful three times daily.
Sept. 11	4,750,000	40	50.5	
Sept. 20	4,850,000	50	51.	
Sept. 29	4,950,000	55	52.	

Menses regular; bowels normal; no disturbances.

CASE X.—Z. F., 30 years old, had a miscarriage two weeks previously, with profuse hæmorrhage. After a month's treatment completely restored to health, and an increase of weight of four pounds.

CASE XI.—A. N., six years old; rachitis and anæmia. Under treatment an increase of weight of two-thirds of a pound. Much better appearance.

CASE XII.—J. W., 30 years old. Pulmonary tuberculosis and anæmia. After two weeks' administration of Pepto-Mangan (Gude), an increase in weight of two pounds and an increase in hæmoglobin of *fifteen* per cent.

CASE XIII.—K. L., 50 years old. Cancer of the stomach, cachexia, and anæmia. During three weeks' use of Pepto-Mangan (Gude) the patient felt better, the appetite had improved, and there was an increase of weight of two-thirds of a pound.

CASE XIV.—A. B., 14 years old. Chlorosis; hæmoglobin 40 per cent. After two weeks' treatment, hæmoglobin 85 per cent; disappearance of all disturbances.

CASE XV.—F. K., 18 years old. Chlorosis; hæmoglobin 35 per cent; after two weeks' treatment 50 per cent.

CASE XVI.—E. J., 5 years old. Anæmia following scarlatina. After eight days' treatment with Pepto-Mangan (Gude) the patient developed a vigorous appetite, and recovered so rapidly that he could be discharged cured at the end of the second week.

Altogether, twenty-three cases of anæmia were treated with Pepto-Mangan (Gude), of which twelve showed a normal hæmoglobin per cent of the blood after fourteen days, five after three weeks, and five after a month. On the other hand, one of the patients who had hereditary trouble (her father having suffered from pulmonary disease) was discharged only improved, the blood, after two months' treatment with Pepto-Mangan (Gude), showing only an increase of hæmoglobin to 75 per cent. This was probably a case of tuberculosis which simulated an obstinate or severe chlorosis at its beginning.

Furthermore, two cases of acute anæmia after profuse hæmorrhages were treated with Pepto-Mangan (Gude). A favorable result was obtained as early as the end of the first week. In one instance the patient felt so well that only the fear of further hæmorrhage constrained him to stay in bed for another week. In the case of three women who had miscarried during the early months of pregnancy, and were making a very slow recovery from the resulting anæmia, I was able to obtain a complete recovery after four weeks' administration of Pepto-Mangan (Gude). In six other instances of weakness and anæmia following acute and chronic disease (tuberculosis, carcinoma, scarlet fever, etc.), a disappearance of the feeling of weakness and a considerable improvement of the general health could be observed in every instance.

The histories cited above will afford conclusive evidence of the high therapeutic value of Pepto-Mangan Gude). Unpleasant concomitant effects and disagreeable sequelæ were *never* observed during the use of the remedy. Eructations, pressure in the stomach, and nausea were never noticed.

In conclusion I would say that Pepto-Mangan (Gude) is a valuable and reliable blood building remedy, which can be recommended for general use in appropriate cases.

The venerable Senator Pettus, of Alabama, remarks: "The secret of living long is to work. I am 81, and happy and healthy as a boy. I notice that all my neighbors who got rich and retired are all dead. I never got rich and I never retired. I tell you, young man, the most fatal disease I know of is to quit work. It kills every time. Keep working and you'll keep alive."

THE 49th ANNUAL COMMENCEMENT OF THE U. V. M. MED. DEPT.

The forty-ninth Annual Commencement of the Medical College, U. V. M., will be held in the Howard Opera House, Thursday evening, June 26th, 1902, at 8 o'clock. Following is the program:

1. March—"Junior Republic" ..... *Eberle*
2. Prayer.
   Rev. Joel Metcalf, Burlington.
3. Overture—"Comique" ....*Bessig*
4. Address
   By Rev. William F. Weeks, Brandon, Vt.
5. Orchestra—"Sweet Caresses, Valse Melodique" *Langey*
6. Award of Prizes.
   Henry Crain Tinkham, M. D., Dean of the Faculty.
7. Valedictory—"Progressive Medicine."
   J. M. Crumb.
8. Selection—"The Chaperons." ..... *Wetmarls*
9. Presentation of Candidates.
   Dr. H. C. Tinkham.
19. Conferring of Degrees.
   Matthew Henry Buckham, D. D., LL. D.
11. March—"Agudween" .... *Shipman*

This Commencement bids fair to be one of the pleasantest in the history of the Medical College. The class almost to a man have been hard conscientious workers, not brilliant, perhaps, but as a whole far above the average.

The members of the class of 1902 during their four years' course have had many advantages that have not fallen to the lot of students before them. Therefore it goes without saying that they are better fitted to assume the responsibilities of practice than any previous class.

Following is a list of the class officers and graduates:

CLASS OFFICERS.

President—D. H. Gatchell.
Vive-President—E. A. Heath.
Secretary—R. C. Jones.
Treasurer—R. J. Harvey.
Valedictorian—J. Mott Crumb.
Historian—Frank C. Lewis.
Marshal—E. E. Sparks.

EXECUTIVE COMMITTEE.

Chairman—B. L. Richardson.
R. B. Wells.
T. Walsh, Jr.

GRADUATES.

Henry Tierney Bray, Hartford, Conn.
Sidney Raymond Carsley, New Portland, Me.
Sheldon Samuel Stratton Campbell, Brockton, Mass.
Jaynes Mott Crumb, So. Otselic, N. Y.
Louis Leopold Davidson, New York City.
Hugh Francis Dolan, Bangor, Me.
Frank Floyd Finney, Ph. B., Hinesburgh, Vt.
John Edward Fitzgerald, Burlington, Vt.
David Harris Gatchell, Old Town, Me.
David James Hoyt, A. B., Amsterdam, N. Y.
Henry Wade Hopkins, Essex Junction, Vt.
Roland John Harvey, East Burke, Vt.
Perly Harriman, Burlington, Vt.
Edward Allen Heath, Burlington, Vt.
Nebuther Holden, Boston, Mass.
Raymond Child Jones, Woodsville, N. H.
Willard Wallace LeMaire, Taunton, Mass.
Peter James Mullen, Beekmantown, N. Y.
Frank Clark Lewis, Burlington, Vt.
John Patrick Lenahan, Hudson, N. H.
Lawrie Byron Morrison, Ryegate, Vt.
George Harvey Parmenter, Montpelier, Vt.
Charles Winfield Philips, Arlington, Vt.
Bert Leon Richardson, Gorham, N. H.
Ernest Elliott Sparks, Williamsville, Vt.
William Moller Shroeder, New York City, N. Y.
Wallace Henry Tarbell, B. L., Kansas City, Mo.
George Southwick Thompson, W. Medway, Mass.
Thomas Walsh, Jr., Middletown, Conn.
Vance William Waterman, Burlington, Vt.
Robert Moore Wells, Barton, Vt.

NEWS, NOTES AND ANNOUNCEMENTS

VERMONT SCHOOL OF INSTRUCTION FOR HEALTH OFFICERS.—The Annual School for Health Officers will be held in Burlington beginning Monday evening, July 7, and continuing through the three following days.

It is the desire of the State Board of Health to make this meeting one of great interest and profit to all who attend. In order to add to the knowledge and efficiency of the various local health officers, the following preliminary program, subject to revision or change, has been arranged.

For the last three years those attending these Schools have unanimously expressed their cordial appreciation of the scope of the work as well as the great aid they have received from the papers and discussions in their work as sanitarians.

We believe the subjects to be presented and discussed at this meeting give promise of being equally valuable. It will not only be a personal loss to any health officer who fails to be present, but it will be a misfortune to his town.

In accordance with Act 91, Laws of 1900, the State Board of Health do hereby call every local health officer in the state to be present at this school at the above time and place. Health officers attending will be entitled to receive from their respective towns, cities, or villages, for which they are appointed, their

Class of 1902,
Medical Dept. of the University of Vermont.

expenses and four dollars per day for time spent, except those who are paid a yearly salary.

As this School of Instruction for Health Officers was established by an Act of the Legislature, the State Board of Health must insist upon every health officer being present. The other members of local Boards of Health are most cordially invited to attend as well as all others interested in improving the sanitary condition of our state. We would especially urge members of the medical profession and the editors of the state press, who are constantly doing so much to educate and improve the whole people, to be present.

Per order of the State Board of Health,

HENRY D. HOLTON,
Secretary.

PRELIMINARY PROGRAM.

Introductory remarks by the President of the State Board of Health, Dr. Charles S. Caverly.

Address of Welcome by His Honor, the Mayor, D. C. Hawley, M. D.

Address by His Excellency, Gov. W. W. Stickney.

Address by Ex-Governor E. C. Smith.

Address by Right Reverend Arthur C. A. Hall, Bishop of Vermont.

TUESDAY MORNING.

Paper, Registration of Vital Statistics, by Charles E. Allen, City Clerk, Burlington.

Paper, Laws Relating to Public Health, by Hon. J. E. Cushman, Burlington.

TUESDAY AFTERNOON.

Paper, Quarantine, Full and Modified, by Dr. Charles S. Caverly, President.

Paper, Schoolhouse Sanitation, by Dr. Samuel H. Durgin, Health Officer of Boston.

Paper, Health Officers and Their Duties, by Prof. Charles A. Lindsley, M. D., Secretary State Board of Health, Connecticut.

WEDNESDAY MORNING.

Paper, Plumbing, by W. R. B. Wilcox, Burlington.

Paper, Ventilation of Public and Private Buildings, by Prof. S. H. Woodbridge, Massachusetts Institute of Technology.

WEDNESDAY AFTERNOON.

Paper, Relation of Animal Diseases to Man, by D. E. Salmon, D. V. M., Head of Bureau of Animal Industries, Washington, D. C.

Paper, Sanatoria for Persons afflicted with Tuberculosis, by Dr. W. N. Platt, Shoreham.

Paper, Report from the London and American Congress of Tuberculosis, by Dr. H. Edwin Lewis, Editor of VERMONT MEDICAL MONTHLY, Burlington.

THURSDAY MORNING.

Paper, Infectious Diseases, by Prof. George H. Fox, M. D., New York City.

Paper, Water Supplies of our Vermont Towns, by C. P. Moat, Chemist to Laboratory of Hygiene.

All of the papers will be thoroughly discussed by gentlemen especially assigned to each subject.

Dr. H. Edwin Lewis has kindly consented to arrange a museum of pathological specimens, illustrative of different stages of tuberculosis and of the means adopted for fighting this disease. This display will be largely from specimens shown at the American Congress of Tuberculosis. There will also be a general exhibit of Sanitary Appliances, by houses dealing in these goods. Tuesday evening will be devoted to an examination of these various exhibits and to an inspection of the State Laboratory.

Wednesday evening Dr. John C. Sundberg of New York will give a lecture on Sanitation in the East, illustrated by a large number of stereopticon views.

Reduced rates will be given over the following railroads: Central Vermont, Boston & Maine, Rutland and branches, Woodstock, Montpelier & Wells River, and Canadian Pacific.

All persons attending the School are requested on their arrival to immediately register at the Laboratory of Hygiene, No. 196 Main Street. A list of boarding houses will there be furnished, where those who prefer can be entertained at very moderate expense.

FRANKLIN COUNTY (VT.) MEDICAL SOCIETY.—The annual meeting of this society was held in RRichford, May 8. The business transacted included a revision of the by-laws, and it was voted to reorganize and affiliate with

the Vermont State Medical Society and the American Medical Association, in accordance with the plans, and in compliance with the terms suggested by these bodies. The officers elected were as follows: Dr. E. Paul Lunderville, St. Albans, president; Dr. Eber L. Washburn, East Berkshire, vice president, and Dr. James N. Jenne, St. Albans, secretary.

THE NEW SURGEON-GENERAL.—Colonel William H. Forwood, assistant surgeon-general, United States Army, has succeeded Dr. George M. Sternberg, as surgeon-general.

A responsible French writer states that there are in Paris 2,600 physicians. Of these 40 earn from $40,000 to $60,000 a year, 50 earn $20,000 a year, 50 from $10,000 to $20,000, 200 from $6,000 to $10,000, 200 from $4,000 to $6,000, whilst 1,700 earn on an average $620. In the whole of France there are 16,000 practicians whose average professional earnings are less than $600 a year, and this amount does not represent net but gross earnings.—Ex.

NINETY-EIGHTH COMMENCEMENT of the University of Vermont and State Agricultural College.

PROGRAM.

SUNDAY, JUNE 22.

3:00 p. m.— Baccalaureate sermon by the President at the College Street Church.

7:30 p. m.— Anniversary of the Y. M. C. A. at the First Church.
Address by the Rev. Alvah S. Hobart of the Crozer Theological Seminary, Chester, Pa.

MONDAY, JUNE 23.

2:00 p. m.— Class Day exercises on the College Green.

8:00 p. m.— Senior promenade at the Billings Library.

TUESDAY, JUNE 24.

9:00 a. m.— Annual meeting of Phi Beta Kappa in Senior lecture room.

11:30 a. m.— Annual meeting of Alumni Association in the college chapel.

12:30 p. m.— Breakfast of the Alumni Association in the gymnasium.
Address by the Hon. Hiram F. Stevens of St. Paul, Minn.

1:30 p. m.— Meeting of the Athletic Association in the college chapel.

7:30 p. m.— Kingsley prize speaking at the College Street Church.

WEDNESDAY, JUNE 25.

11:00 a. m.— Orations by the graduating class.
Conferring of degrees.

2:00 p. m.— Corporation dinner at the Van Ness House

8:00 p. m.— President's reception at the Billings Library.

THURSDAY, JUNE 26.

9:00 a. m.— Entrance examinations in the Williams Science Hall.

MEDICAL COMMENCEMENT

8:00 p. m.— Exercises of graduation at the opera house, followed by banquet at the Van Ness House.

Music furnished by the Howard Opera House Orchestra.

LIME IN THE EYE.—Wash the eye thoroughly with a large quantity of warm water—for a little water but adds to the trouble by slacking the lime—and then introduce a solution of sugar and water. This is superior to solutions of vinegar or dilute acids, because sugar forms an insoluble compound with lime. —Alkaloidal Clinic.

Wm. Osler, M. D., in the *Sun*, of January 27, 1901, says: "A new school of practitioners has arisen which cares nothing for homeopathy and less for so-called allopathy. It seeks to study rationally and scientifically the action of drugs, old and new."

BURLINGTON AND CHITTENDEN COUNTY CLINICAL SOCIETY.—The regular monthly meeting of the Burlington and Chittenden County Clinical Society was held at their rooms at 162 College St., May 30, 1902. The President, Dr. M. C. Twitchell, occupied the chair.

Dr. A. O. J. Kelly of Philadelphia read a very important and interesting paper on "The Treatment of Chronic Interstitial Nephritis." which was amply discussed. The meeting, which was well attended, adjourned at a late hour.

N. H. MEDICAL SOCIETY.

OFFICERS ELECTED AT FRIDAY MORNING'S SESSION.

At the annual meeting of the New Hampshire Medical society, officers for the ensuing year were elected as follows:

President, I. A. Watson, Concord.
Vice President, Ezra Mitchell, Lancaster.
Treasurer, M. H. Felt, Hillsboro Bridge.
Secretary, Granville P. Conn, Concord.

Executive committee: F. A. Stillings, Concord; George D. Towne, Manchester; W. T. Smith, Hanover; F. E. Kittredge, Nashua; Ira J. Prouty, Keene; A. C. Heffinger, Portsmouth; G. W. McGregor, Littleton.

Anniversary chairman, S. M. Dinsmoor, Keene.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

H. EDWIN LEWIS, M. D., *Editor.*

FRANK C. LEWIS, *Business Manager.*

ASSOCIATE EDITORS,

D. C. Hawley, M. D. *Burlington, Vt.*

C. S. Caverly, M. D. *Rutland, Vt.*

S. C. Gordon, M. D. *Portland, Me.*

G. P. Conn, M. D. *Concord, N. H.*

J. N. Jenne, M. D. *St. Albans, Vt.*

A. Lapthorn Smith, M. D. *Montreal*

A. B. Bisbee, M. D. *Montpelier, Vt.*

J. M. French, M. D. *Milford, Mass.*

F. S. Hutchinson, M. D. *Enosburg Falls, Vt*

BURLINGTON, VT., JUNE 25, 1902.

EDITORIALS.

THE UNIVERSITY OF VERMONT MEDICAL DEPARTMENT.—This issue is complimentary to the Medical Department of the University of Vermont, and it is with great pleasure that we can record the excellent condition of the institution at this its Forty-ninth Annual Commencement. We do not think the statement can be controverted that the Medical Department has just passed through one of the most successful years of its existence. Not only in attendance but in the splendid course of study given to the students, there is every reason for satisfaction. There is not a student who can complain at the facilities provided for acquiring a practical, sound knowledge of medicine, and the student body with one accord are appreciative of the uniform kindness and interest shown by every member of the Faculty.

In view of the good work that the University of Vermont Medical Department is doing, and always has done, it should receive the loyal, undivided support of every alumnus. Every man holding its diploma, who from personal or other motives, casts a slur on its reputation or decries the undeniable progress it is making, injures himself. He cannot get away from the fact that he graduated from the institution and a reflection on a man's Alma Mater is always a reflection on himself and his professional education.

Let the men, then, who would criticise the Medical Department get close to the institution and find out the real status of affairs, before assailing its good name or standing. They will find that the institution was never on a better or more progressive basis than at present and that the work it is doing compares favorably with that of any medical college in the country. They will find that the men connected with its teaching force are loyal to its interests, and enthusiastic in their efforts. And finally, if they have followed its progress they will find that the institution has grown, broader, better and more useful year by year. That it will continue so requires no assurance from us who know its past and its present.

Then here's to the University of Vermont Medical Department, and all those who have, or are, or may contribute to its success as teachers or students. May its future be as brilliant as its past and its present success be but a promise of greater ones to come.

SOME NEEDS OF THE U. V. M. MED. DEPT.—In this connection it may not be amiss to call attention to several needs of the U. V. M. Med. Dept. In the growth of any institution new needs are bound to arise and just this thing has occurred in regard to the Medical Department of the U. V. M.

A new college building is the first need of the Medical Department. In the development of the graded course with its many lectures, recitations and laboratory courses, the old building has been taxed to its utmost, and it has been found necessary to establish several laboratories outside of the building proper. A new modern structure with ample class rooms, amphitheatres, laboratories and offices all under one roof is certainly needed and we hope to see its accomplishment within the near future.

No educational institution can meet its expenses by the income from its students alone. It

must have endowments for the maintenance of professorial chairs in each subject and in the development of medical science additional professors are constantly being made necessary. Although the Medical Department is an integral part of the University of Vermont, there is at yet no endowment available for its support. To assist the Medical Department to greater efficiency specific endowments are needed, and certainly as the institution stands to-day, there is no more worthy object of philanthropy Now-a-days we give to our churches, our schools, our universities, our homes, our libraries and every worthy cause, but the medical college. And yet in view of the great need of humanity for good, competent doctors, what more laudable cause should receive our support than the development of efficient institutions for medical education. Sooner or later the philanthropically inclined will awake to this fact and we hope that abundant resources will be made available at an early date for carrying on the splendid work of the Medical Department of the U. V. M.

There are several minor needs of the institution but the last great one of which we shall speak, is the organization of an Alumni Association. The alumni of an educational institution can exert a powerful influence in its progress and success if they are so inclined, and in no better way can their interests be maintained and held than by a live Alumni Association. This the U. V. M. Medical Department ought to have for its future interests.

Let all alumni, therefore, unite in giving our Alma Mater our loyal support, and in every way show our sympathy with its needs and our satisfaction with its progress.

The New Graduate.—He who graduates from any medical college to-day is certainly capable of approaching the bed-side of a sick person and observing his condition, discerning the mildness or severity of his malady and outlining a proper course as method of treatment. He is on the alert for any untoward symptoms. He is ambitious to get speedy recovery. He is ever fearful of serious consequences, and in view of this, he is never too proud to refer to his old friends, "His text-books."

The common saying, "He is too young," is out of date and untrue. More true is the new saying, "He is too old." Yet we do not mean to say that the practitioner of long experience now nearing the end of his allotted term of years, is useless and should be placed on the active list. He is the counsellor and advisor.

The new graduate, who is at once the new practitioner, is active, ambitious, earnest and ever ready to oblige and relieve the slight complaints of mankind. And do not the little ills of life irritate and destroy man's patience and finer qualities? Do they not make the pathway of life one continuous round of hardship, mental as well as physical?

The new graduate of the U. V. M. Medical Department, having had many necessary trials and tribulations and many rough edges knocked off by teachers anxious to get polished diamonds from rough stones, is cognizant of small troubles and trifling ills and therefore ready to relieve rather than ignore them. And is not this the greatest of the great deeds of life, to do the little kindnesses and remove the little stones in life's pathway and thus make earth's rough journey a little easier for some poor sickly soul? Thus the new practitioner has just as important a mission in the beginning of his career as in later life.—D. J. H.

Medical Progress in Vermont.—It is not egotism that leads the medical profession of Vermont to feel that they are well forward in the van of scientific progress. Although in a measure the doctors of Vermont are away from the great medical centers of our country it cannot be said of them that they fail to keep in thorough touch with medical affairs and advancement. Our hospitals are small

and unpretentious but thoroughly equipped, and what they lack in size is more than made up in the results obtained in the treatment of the sick.

In sanitary matters Vermont is equalled by few, excelled by none, and in some respects has set the pace for other states in advancing along the line of sanitation. An annual school for Health Officers was first inaugurated in Vermont and the importance of this movement was so apparent from the first that like schools are now being held each year in several other states. Our State Laboratory of Hygiene is a model institution, controlled and supported by the state and the splendid work it is doing is being demonstrated every day. The only medical college in the state, the Medical Department of the University of Vermont, requires no statement, for every one knows its high standing, the character of work it has done in the past, and the progress it is making every year.

Our medical laws are not the best but they compare favorably with those of other states and the prospects are good for their betterment. In fact the only thing Vermont really lacks from the medical standpoint is a good state sanitarium for the care of consumptive patients. This is sure to come within a short space of time, and Vermont, then, will rank as high as any of her sister states in all things that concern the health of her people and the efficiency of her medical men.

EDITORIAL NOTES AND CLIPPINGS.

Hospital Dead-beats.—A prominent surgeon in Brooklyn has started a good work in instituting legal proceedings for the collection of certain bills from hospital patients of his who were able but unwilling to pay for his services. Their contention that as hospital patients they were entitled to his service gratis is a poor defence morally, and we trust it will also be found such legally. Physicians give their services to hospitals in the treatment of the poor, but that does not follow that they also give them to the undeserving rich. We are not aware that the question here raised has ever been passed on by a court, but there is no question as to the abstract justice of the Brooklyn surgeon's demand. With the multiplication of hospitals, which is the order of the day, the matter is an important one, and we hope and trust that he may win his suit. If it should be decided that only charity medical practice is permitted in public hospitals, or that it is always implied in such institutions except where it is otherwise expressly stipulated, then let the hospitals use a better discrimination in their admissions and hospital surgeons and physicians make this a prerequisite for their services. The medical profession is not to be always considered a "soft snap" for well-to-do impostors. There has been enough of that in the past, is altogether too much now, and what there is to be in the future is a matter for us to seriously consider. The surgeon in question is doing a service to his professional brethren in thus instituting his suits. The results will be serviceable as a future guide to the profession, and, if he succeeds, a valuable legal precedent.—*Journal of the A. M. A.*

Modification of the Code of Ethics.—"Some years ago there lived and labored among us for the good of mankind and the honor of a profession a man whose genius was of the highest order, and whose fame carried the name of American surgery throughout the civilized world. He was one of those fearless pioneers in science who found his place ever on the frontier clearing the way for those who were to follow. In 1876, at the meeting of the American Medical Association, in Philadelphia, Dr. J. Marion Sims, in his presidential address, referring to the code of ethics, says: 'The time will come when your organic laws like the constitution of our country, will require modifications and amendments to suit a higher intelligence, a broader education and a

greater destiny.' In my opinion, the time has come when we cannot absolve ourselves from the responsibility of doing away with the inconsistencies for which we may now be properly criticised."—Extract from Dr. Wyeth's presidential address, Saratoga Meeting Am. Med. Association.

STRAY THOUGHTS

From Everywhere, by Everybody and for Everyone who Wants to Read Them.

EDUCATION.—I don't think it makes any difference wan way or th' other how free ye make idjacation. Men that wants it'll have it be hook an' be crook, an' thim that don't ra-aly want it niver will get it. Ye can lade a man up to th' university, but ye can't make him think.—*Mr. Dooley.*

DEGREES.—A degree is a certyficate fr'm a ladin' university entitlin' ye to wear a mother Hubbard in spite of th' polis.

"I commend you to the goddess of ambition.

"True, she cannot change the laws by which the Almighty governs the universe; she cannot remove the accursed stuff that weighs upon the heart; she cannot soften the pillow upon which you end your career, nor light the way through the darkness beyond. You must go to another altar for these things; but she teaches the three great virtues of labor, aggression and perseverance, and she points her pupils to the experience of the world to show them that dishonesty rots a man down, limits his usefulness and shortens his career, and that therefore he is a fool who will pursue that path. She loves her votaries, and few be they who, following her precepts, come away from her altars empty handed, or visit her shrine in vain."—John P. Altgelt.

BOOK NOTICES.

AMERICAN EDITION OF NOTHNAGEL'S ENCYCLOPEDIA.

Diphtheria. By Wm. P. Northrup, M. D., of New York. Measles, Scarlet Fever, and German Measles. By Professor Dr. Th. von Jurgensen, Professor of Medicine in the University of Tubingen. Edited, with additions, by William P. Northrup, M. D., Professor of Pediatrics in the University and Bellevue Medical College, New York. Handsome octavo, 672 pages, illustrated, including 24 full-page plates, 3 of them in colors. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $5.00 net; Half Morocco, $6.00 net.

This volume, the third in the series of English translations of the "Nothnagel System of Practical Medicine," needs no recommendation. Professor Jurgensen and Dr. Northrup are too well known for us to expect anything but the best. The article on Diphtheria, entirely original with the editor, is fully in keeping with the high standard set by the other German articles which comprise the work. Dr. Northrup, having been associated with Dr. O'Dwyer at every step in the perfection of intubation tubes, is particularly fitted to describe this aspect of the treatment of diphtheria.

Prof. Jurgensen's monograph on Measles unquestionably is the most comprehensive contribution on that infection that has appeared, bringing out so fully the valuable Danish records of the Faroe Islands epidemic. His exposition of Scarlatina is unrivaled both for richness of clinical detail and exactness and clearness of statement. "Fourth Disease" and Gereman Measles have been accorded spaces consistent with their importance. The editor has shown judicious decision in his extensive additions, making the work far and away the best and most up-to-date treatise of the subjects extant. The book is profusely illustrated, containing, besides a large number of text cuts, twenty-four full-page plates, three of which are in colors.

SAUNDERS' MEDICAL HAND-ATLASES.

Atlas and Epitome of Otology. By Gustav Bruhl, M. D., of Berlin, with the collaboration of Professor Dr. A. Politzer of Vienna. Edited, with additions, by S. MacCuen Smith, M. D., Clinical Professor of Otology, Jefferson Medical College, Philadelphia. With 244 colored figures on 39 lithographic plates, 99 text illustrations, and 292 pages of text. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $3.00 net.

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This excellent volume, the first attempt, to our knowledge, to supply in English an illustrated clinical handbook to act as a worthy substitute for personal instruction in a specialized clinic, is, indeed, a magnificent addition to Saunders' Series of Medical Hand-Atlases.

The work is both didactic and clinical in its teaching, the latter aspect being especially adapted to the student's wants. A special and highly commendable feature is the very complete exposition of the minute anatomy of the ear, a working knowledge of which is so essential to an intelligent conception of the science of otology. As in all this series of atlases, the illustrations are beautifully executed in colors, and illuminate the text in a singularly lucid manner, portraying pathologic changes with such striking exactness that the student should receive a deeper and more lasting impression than the most elaborate description could produce. Further, the association of Professor Politzer in the preparation of the work, and the use of so many valuable specimens from his notably rich collection, especially enhance the value of the treatise. The work contains everything of importance in the elementary study of otology, and, without question, is a most valuable contribution to medical literature.

NEWER REMEDIES.

The Rigid Os.—We all know how very trying it is to the physician, to say nothing of the unfortunate patient, who after some hours of suffering from labor pains finds herself tired and greatly exhausted, because of a rigid os.

This condition is so frequently encountered by all obstetricians, and unless relieved prolongs labor and depletes the vitality of the patient. In these cases H. Marion Sims, M. D., uses Hayden's Viburnum Compound with good success and if this eminent practitioner so readily endorses H. V. C. we have no hesitancy in freely recommending its use in the above condition.

In papine advanced pharmacy has given us a perfect opium preparation. It possesses the anodyne virtues of opium and not the constipating and untoward actions. Papine may be driefly defined as the only opiate which is free from the evil effects which I have just named. It is very prompt, in this respect excelling any other opiate, and it never produces nausea, constipation and the usual woes that go hand in hand with the old-time opiates. Papine is, therefore, the remedy which is indicated in all forms of inflammatory pain. It is given in doses of one teaspoonful every one, two, or three hours,until its anodyne action is attained. In giving papine, we can bear in mind that a teaspoonful represents the strength of one-eighth of a grain of morphine. Having this fact in mind, the dosage which is appropriate in any case will at once suggest itself.

Extract from "Remedial measures indicated in affections attended with Pain," by G. S. Trotter, M. D., *New Albany Medical Herald.*

Sanmetto in Cystitis During Pregnancy.—To whom it may concern: Of the many cases of cystitis in women during their pregnant state, while in my private hospital, likewise in my general practice throughout this city, Sanmetto, prepared by Od Chemical Co. New York, is the only drug that gave satisfaction.—E. Duval Colley, M. D., Cincinnati, Ohio.

John Milton Bigelow, M. D., Professor of Therapeutics, Albany Medical College, Albany, N. Y., says: "I have used and prescribed Fellows' Hypophosphites during the past fifteen years frequently. This preparation has seemed to answer a better purpose in promoting constructive metamorphosis, and in arresting the progress of phthisical complaints, than any other with which I am acquainted."

The Maltine Company have just issued a valuable card giving a list of poisons and their antidotes. They will gladly forward this card, suitable to be hung up in the office, to any physician making application for it.

The Vermont Medical Monthly

Vol. VIII. July 25, 1902. No. 7.

ORIGINAL ARTICLES

MEDICO-LEGAL PHASES OF THE VERMONT OBSERVATION LAW FOR CRIMINAL INSANE.

By Walter D. Berry, M. D.

Medical Director and Pathologist Vermont State Hospital for Insane, Waterbury, Vt.; Professor of Mental Diseases, University of Vermont.

"An act authorizing persons indicted for offenses or committed to jail on a charge thereof, whose plea is insanity, to be ordered into the custody of the Vermont State Hospital for Insane, to be there observed and detained until the further order of the judge, so that the truth or falsity of such plea may be ascertained."

Hughes in an excellent monograph and commentary on the subject of expert testimony, says: "the feelings of horror and vengeance aroused by the bloody deeds of sane or insane, completely unfit the popular mind for a careful and impartial investigation of the plea of insanity. This fact, therefore, should be convincing to most fair minded people, that the mental condition of the accused when insanity is suspected or asserted, should be inquired into by men who have become fitted for such duties by thorough study and experience." It is hardly necessary to go into a labored and detailed argument to prove that this is so, because the aforesaid method of determining the grave and delicate question of insanity must be infinitely more satisfactory than that of summoning medical witnesses to the trial, who have in the large majority of instances, very imperfect notions regarding such diseased forms,have had perhaps very limited experience in mental diseases and on the other hand have never had the least communication with the accused or in most instances perhaps have possibly had one interview. They then proceed to force out their expert testimony amid the embarrassment produced by the ingenious cross-questioning of the respondent's counsel who are simply bent on puzzling and distracting their minds. If a physician, after listening to divers vague and rambling details concerning a person's ill health and looking at him across the apartment, without being permitted to address him a single word or lay a finger on his person, should then be required to say, on his oath, whether or not the individual in question was suffering from inflammation of the lungs, bowels or kidneys, he would scarcely refrain from smiling at the stupidity of him who would expect a satisfactory answer. And yet as foolish and absurd as this may seem, such in fact was formerly the working of the law when the disease whose existence or non-existence was to be determined, happened to be insanity.

When mental derangement is suspected, there are many physical symptoms and numerous other circumstances which cannot be investigated in an hour or a day, but on the contrary require most diligent and painstaking observations that may occupy weeks or months before a correct diagnosis can be arrived at. The truth of this view can readily be appreciated when one reviews the many judicial errors in sentencing persons who belonged to the irresponsible class. The experience of Dr. Allison of the Mattewan Hospital in New York, is as follows: "It will be noticed that out of one hundred and seventy-nine persons who have committed murder, over fifty-three per cent were received from the prisons, having been sentenced for life. So far as it is possi-

ble to judge from their histories and from the character of their disease, at least forty per cent of such convicted cases, were insane at the time the crime was committed. In many instances the fact of their insanity was not recognized at the time of their trial, but in others the plea of insanity was set up by the defense and failed."

In reporting from the statistical tables from the inspectors of prisons and asylums in the Province of Quebec, we find the following: "From 1881 to 1897, inclusive, 1197 insane were admitted to the common jails of the Province; of this number only 498 were incarcerated for safe keeping whilst waiting for the proper papers to be made out for their removal to the asylum. Deducting the 498 cases, who were intentionally committed as insane, their mental condition being known, there remains a total of 699 insane condemned during a period of seventeen years, which is an annual average of 40 unrecognized and condemned insane."

In 1899, Drs. Villeneuve and Chagnon, in a paper reviewing the literature concerning the judicial errors abroad, cited as follows: "In 1892, Dr. Paul Garnier, chief physician of the infirmary of the Paris Prefecture of Police, in his report, presented to the anthropological congress at Brussels, a statistical table of unrecognized insane, who were condemned and afterwards sent from the various prisons of the department of the Seine to the special infirmary, in order to undergo an examination as to their sanity. The number of insane found was 255."

Dr. Butler Metzger, in an investigation of the last 400 admissions to the Massachusetts Asylum for Insane Criminals, says: "Of 64 breaking and entering cases, 18 cases were, as far as can be judged, insane at the time of their trial. Six of these were recognized as irresponsible and not sentenced. The 12 remaining were sent to penal institutions. Of 31 'larcenies,' 18 were apparently irresponsible. Fifteen of these were sentenced. Of 39 'drunks,' 14 were irresponsible, and but two recognized as such. Of 17 'assault' cases, 6 were irresponsible, one of them recognized as such. Of 14 robbers, 7 were irresponsible. One of these was recognized as insane and sent to the asylum. O, 17 'assaults to murder,' 10 were irresponsible. Of these, 5 were recognized as insane. One in addition was possibly considered insane but was kept five years in prison before being sent here. The medical certificate of the physicians who recommended his transfer, reads: 'We feel that he was insane at the time he was committed, although he was not reported as he was harmless, etc.' Of 10 murderers, 5 were irresponsible and all were recognized as such. Of 10 'assaults with a dangerous weapon,' 6 were irresponsible and 3 of them were recognized as such. Of 5 'rape' cases, 3 were very marked imbeciles but all were sent to prison. Of 6 'assaults to rape,' 2 were insane, one of them recognized as such. Of 6 'assaults upon female child,' 5 were irresponsible, 3 of them recognized as such. Of 3 'indecent assaults,' one was insane and sent to asylum. The other two had as much or more mental enfeeblement but both were sentenced. Of 4 'habitual criminals,' 2 had had systematized delusions for over ten years, one for several years before sentence, and the remaining man was an imbecile. All received 25-year sentences. Of 3 'idle and disorderly' cases, 2 were palpably insane and one probably so, when sentenced. Of 3 cases of stubbornness, one was an epileptic, one a marked imbecile, and one neurasthenic with delusions at times. All were sentenced. Of 2 sentenced for 'non-payment of fines,' one was an epileptic, the other in the beginning of dementia præcox. The one perjurer was a paretic. Of 3 swindlers sentenced, one was a paretic, one a very low grade imbecile. The man sent to prison for malicious mischief was a case of acute mania at time of arrest. An investigation of the vagrants showed what might have been expected by any one who comes much in contact with

this class. Of 111 men sentenced as tramps, 92 were clearly irresponsible and should have been sent to an asylum in the first place. Only one was recognized as insane. The great bulk of the 'hobo' class is degenerate, but only those who are troublesome attract enough notice to have their mental condition examined, otherwise very many more would become inhabitants of an insane hospital. It is not advocated that every mildly demented or moderately deficient man should be committed to an institution for the insane, but a careful examination before sentence, would weed out many cases that sooner or later will be a serious menace to the community.

To sum up these cases, out of 400 men, 216 were apparently irresponsible at the time they were tried. Only 40 of these were recognized as such."

With the light of the past in view, we can readily appreciate the value of an observation law, which investigates conservatively and thoroughly into the rationality and responsibility of persons accused.

Scarcy in American Journal of Insanity, Vol.LVI,says: "The matter of criminal insanity has given rise in time to much discussion and many differences of opinion. If a person has committed a crime, a high crime particularly, the State naturally assumes the attitude of resisting the plea of insanity, introduced for the purpose of relieving the party accused from punishment, and sets back its definition of insanity to a much more extreme grade of defectiveness than for any other purpose. This is done of course through fear of an abuse of the privilege; yet in this particular, the medical profession have in many cases, considered the courts much too conservative. For this reason, too, we can find legal opinions of what constitutes insanity, in such cases to be quite inconsistent, and to differ greatly according to the conservatism or liberality of the different courts. It has always been the case that a much more extreme grade of defectiveness has been defined as insanity and has been required to be proven, in order to absolve the party indicted for crime from the penalty of the law, than for any other purpose. The law has seemed more reluctant also, to admit grades of defectiveness in these cases than in others; it has seemed more anxious here than anywhere else to have a hard and fast level or upper limit fixed by which to define insanity or irresponsibility; and especially, concessions, admitting that there are ever grades of moral ability or disability, have been very reluctantly granted.

Numerous tests have been prescribed by the courts defining insanity in these cases. We find these tests to have varied greatly. In fact there seems to have been no unanimity of opinion on the subject. At first no person was absolved from the penalty of the law because of mental defectiveness; if the crime was committed the ax fell. Then, as advances in psychiatry were made, the concession was granted that the person would be declared irresponsible if he was mentally so defective, at the time he committed the act, on the ground that he "did not know what he was doing." If he trampled his child to death, for instance, he must be so defective as to be unconscious of his act,have-no-intention in it and have no memory of it afterwards." Of course this was an extremely low test.

An advance in the legal rulings was made when this test was changed so as to grant that the man may not only know what he is doing but also have conscious intention in what he does and have memory of it afterwards, but the grade of defectiveness, which would absolve him in such a case, would be, he must not be able to appreciate the character of the act—that it is theft, or murder or arson in the eye of the law. Knowledge of the "character of the act" in its higher phases, involves a knowledge of its so-called "rightness" or "wrongness," so that the wording of this test in time became the "knowledge of right and wrong test." This test has held its ground for a long time but does not necessarily mean

that it covers all cases, for in special forms of insanity it would be wholly inadequate for proper judgment as to the insanity of the individual but perhaps as to the individual's responsibility. Lord Chief Justice Mansfield, in the trial of Bellingham whose plea was insanity, said in his charge to the jury: "The single question was whether at the time the act was committed, he possessed a sufficient degree of understanding to distinguish good from evil, right from wrong and whether murder was a crime, not only against the laws of God but the laws of his country." Although this eminent judge in this instance set forth to the jury the consideration of the "knowledge of right and wrong test," yet it is an indisputable fact and generally recognized by alienists at the present day, that by far the great majority of the insane appreciate the difference between right and wrong. In the light of this test, then, we see again how the viewpoint must be broadened.

Many inconsistencies appear in these opinions because of the failure to recognize insanity as a symptom—complex i. e. to recognize it as a diseased entity progressing forward by distinct stages to a state of mental alienation represented by faulty perception, hallucinations, delusions of reference, persecution, lack of insight into moral disability, etc.

Mental defectiveness is a much graded and greatly varied qualification. There is ev shade, grade and degree as well as kind, of the different types of moral and intellectual ties and disabilities and in order to properly observe these cases pursuant to ascertaining the amount of their defectiveness, the criminal whose defense is insanity, ought to be detained under skilled observation.

Undoubtedly the conception constituents of what to-day comprise our whole nervous system is vastly different from that which was supposed to constitute it five years ago. Then we had the cell, nerve fibre and terminals; today we consider the general histologic element composed in the word neuron, which consists of the cell neuraxon, terminal filaments, collaterals, dendrites and where formerly the weight and size of the brain was supposed to be the criterion by which we might judge of a man's intellect, to-day we have an entirely different condition by attempting to judge of number and conditions of these elemental neurons. Therefore the anatomical base of judgment concerning the nervous system has changed to such an extent, that only those who have had special training along such lines, are capable of grouping together the necessary factors toward the completion of sound judgment on insanity.

Unfortunately we are too frequently asked upon the witness stand to give a definition of insanity. *Shepard* says "Insanity is a disease of the neurine batteries of the brain" and gives as his opinion that the efficiency of the definition lies in the fact that it usually puzzles the lawyers. In these cases requiring medical testimony, lawyers possessing considerable knowledge of medical jurisprudence and a brief smattering of medicine and still less upon psychiatry attempt to formulate definitions of their own and adroitly pull the expert witness into the meshes. *Mandsley* says, "Insanity is a morbid derangement, generally chronic, of the supreme cerebral centers, the grey matter of the convolutions or the intellectorum commune, giving rise to a perverted feeling, defective or erroneous ideation and discordant conduct, conjunctly or separately and more or less incapacitating the individual for his due social relations." All definitions, however, though they be brief or voluminous will of necessity fall short of covering every individual case.

There seems to be an opinion quite popular among certain of the legal profession, that a man to be insane must be veritably a raving maniac, while just the opposite condition may exist. A man may be courteous, intelligent, polished, affable and yet be hopelessly deranged. Many times it is very difficult to determine the exact mental condition of an insane person, because of their having such per-

fect control over their actions. Several cases are on record where an insane person has received permission to address the jury and after doing so, has been released and thus spread the feeling about among the jury and populace, that judge, lawyers and doctors were seeking to do injustice and in reality the respondent was of greater intellectual acumen than those who were seeking to incarcerate him in an insane hospital. It is this very point in which an attempt is made to judge as to insanity in a few moments or days, that causes the greater portion of errors. Surely one great accomplishment of science to-day, is in the fact that there is little in the general aspect or appearance of the eye which leads an expert or any other professional brother, to make a "snap diagnosis" of the disease by a casual "all-sweeping" glance at the physiognomy. In the hearing of such cases, you hear the lawyers harp on "the wild eye of the insane," and yet there is no one who has had any experience who will not insist on the fallacy of such a general statement. There are forms of insanity, it is true, which present characteristic expressions, as for instance the dement, but, as we pass through a hospital for the insane and observe the different patients playing cards or perusing papers and periodicals and attempt to study diagnostic symptomatology from their features alone, we would soon be aware that we had attempted an herculean task. We can not do it in any such way. It is only by collecting data from observations extending over weeks and perhaps months that we can hope to arrive at a true symptom complex and form a judgment correctly.

The plea of insanity is much abused and exceedingly weighted down with evil intents, and the plea itself is denied by press and public quite generally, however none will dispute the fact that where real insanity is proven to exist, it would be most unjust to subject such person to the rigorous penalty of the law, when his mental powers are morbidly impaired or destroyed and who therefore must be irresponsible. An eminent authority has said: "such cases should be left to a commission of medical experts for adjudication." Thus we see again the opinion of experience is to resort to observation and data for the estimation of the delicate question of insanity.

No better method for obtaining a correct retrospect of the cases that have been brought to us during the past biennial year, than to review several of the most typical.

Case No. 1095.—Indictment "Assault with intent to kill." Observation Case, plea insanity. Diagnostic Summary: Alcoholic depression (on constitutional basis) on ground of well marked periods of irritability, delusions of persecution, at times confusional state and constant melancholic attitude; considerable retardation of stream of thought, particularly noticeable in act of concentration; anorexia; insomnia, various types of physical tremor, (particularly of the lips), this disappearing later on, gradually appearing more cheerful, talking more readily, asserting later a feeling of well being and taking considerable interest in his surroundings. The *constitutional* bearing of the case characterized by the unbounded hereditary tendency to depression of mind. "A number on father's side had what they called hypochondria;" mother's brother epileptic; paternal cousin, insane at Concord Asylum. Anamnesis shows patient to have been susceptible to derangement of mind by slight physical causes. *Alcoholism* the factor of undoubted strong etiological bearing, reputation of being "a steady drinker," keeping hard cider in the house and partaking freely. Sub acute alcoholic paranoia ruled out on ground of the lack of systematization of the delusions of persecution. *An attack of grippe* undoubtedly contributed largely to the weakened physical condition just previous to arrest. This case was discharged by the court on ground of insanity.

Case No. 1099.—Observation Case. Indictment "Larceny." Plea insanity. This case was one of unique interest since a decided attempt was made to exaggerate the mental alienation and thereby evade some of the disagreeable phases of prison life. The rather extended anamnesis from friends and relatives emphasized and exaggerated the eccentricity of comparatively trivial incidents in previous life, which coupled with a distinct effort on the patient's part to be rated as mentally aberrated, gave a rather difficult case for diagnosis and

one might have been easily led astray if granted only the usual hypothetical opinion based on a short interview. A diagnosis of *not insane* was made on the ground of absence of any true symptom-complex; perfect orientation at all times and finally full insight and confess into his true condition and no elicited defect of memory or intelligence sufficient to warrant criminal actions, which it appeared were always executed after considerable deliberation. The court discharged the case in care of probation officer.

Case No. 1065.—Indictment "Murder." Observation case. Plea insanity. Defense brought in a strong plea for paresis mainly on account of "florid countenance—defective hearing and loss of memory associated with venereal scars." The diagnosis given to the court was as follows:

Simulation on ground of repeated discrepancies in statements; making light of alcoholic habits, repeated assertions concerning his defective memory, particularly for events immediately surrounding his criminal actions, at one time relating a detailed description and then again denying he had done so, disclaiming all knowledge of his movements at the time of his crime; making melo-dramatic attempts to excite sympathy and belief in his derangement of mind; complaining of noises rumbling in his ears (presumably trying to establish hallucinosis). During mental examination, losing his temper, exhibiting a threatening attitude and soon after confiding to a fellow patient that he believed he would be hung. Apparently showed some disorientation as to time, but subsequently time orientation was judged to be correct as he was always able to pick out the daily paper. Falsifications prominent, telling physicians he had no knowledge of the sheriff serving divorce papers on him and yet gave a detailed description of said person *et cetera* and in fact presented the usual complexity of one trying to impress those about him as to his mental aberration; in other words, *A Malingerer.*

This man the jury found guilty and sentenced him to be hanged. During the trial it was plainly observable that had it not been for the State presenting to the jury a thorough understanding of the case, brought about after months in the hospital under constant observation, the arguments for the accused in regard to paresis might have been considered more seriously.

Case No. 1068.—Indictment "Assault with intent to kill." Observation case. Plea insanity. Asserted causes "fall from lumber pile" —paternal grandmother and father insane. Patient complained of total period of amnesia just prior to, and including his murderous act. In hospital showed marked adroitness in simulating insanity and for several weeks opinion was given setting forth symptoms for a psychosis but later on discrepancies in former statements appeared, melo-dramatic delusions were complained of, confided to one of his number that he expected his freedom shortly, later tripped up in his statements, showed a remarkable degree of lucidity, cursed the doctors and gave every evidence of being a *Malingerer.* Convicted by court and sentenced to prison.

Case No. 1059.—Indictment "Assault." Observation Case. Diagnosis: *Not insane*—attempts at simulation would seem to be manifested because of the individual seeking to impress one as to his memory defect, although artfully not admitting insanity; the carelessness and listlessness with no expressed desire for discharge and his general satisfaction with his condition, at first seemed to indicate deterioration but later on showing outbursts of temper and full realization of conditions and responsibilities. He was undoubtedly drunk during the assault, but having had no history of delirium tremens, hallucinosis or delusions of persecution, an alcoholic psychosis could not be agreed upon. Several months after admission threatened to kill himself if not given his liberty and thereupon being transferred to suicidal ward under close observation, confessed to physicians that "it was only a bluff." From the history given from various sources, this case rightly belongs to the district criminal class.

Case No. 1256. Observation case. Indictment " assault with attempt to rape." *Diagnosis,* imbecility on ground of previous history of low grade heredity, as a child was always peculiar; the butt of jokes at school; a very poor pupil scarcely ever able to learn anything; continually disobedient at home until sent to Reform School and there requiring harsh disciplinary measures but with little result for the better; returning home and continuing lazy and shiftless and then arrested on grounds of assault with intent to rape; pleading guilty and later retracting his plea on the ground of not knowing what that term meant; committed to the hospital under the observation act and here oriented as to time and place; memory good; poor insight; defective intelligence and judg-

ment as shown by repeated tests, showing in addition repeated falsifications entirely without plan of procedure, physically his calvarium showed considerable narrowing of frontal area and palate was high and narrow.

On the other hand many cases have been returned to the hospital from the State Prison as insane, who were undoubtedly deranged at the time of their criminal actions. *Case No. 962.* F. S. Indictment "rape upon a child." Sentenced to State Prison at Windsor and since brought to hospital as insane. Returned to prison after about a year's sojourn in the hospital and judged to be a malingerer, however, in the light of action at prison, together with self-mutilation and suicidal acts, he has been adjudged mentally unsound and now resides with the criminal insane.

Case No. 267. Indictment "Murder." This case being of interest from the fact that during the trial the introduction of experts on both sides and many hypothetical opinions, rendered the case as of great expense to the State and also unsatisfactory in the light of the present observation law. One member of the jury held out for insanity during a long and trying period, the case finally being disposed of under a sentence "imprisonment for life." A comparatively short time elapsed and this man was admitted to the hospital as definitely insane. There is little doubt but what this patient was insane at the time of his criminal action.

Still another case indicted for "assault with intent to kill" was adjudged sane at the time of his preliminary trial by experts, and his wild actions at the time attributed to simulation. The man forthwith was sentenced to the State Prison at Windsor but not long afterward was returned to the hospital under the ordinary certificate, as a case of insanity. As an unrecognized case of mental disease, this man stands out prominently from the fact that public sentiment rallied itself against the prisoner and possibly influenced those who were called upon for a professional opinion. If recourse had been taken, to the present observation act, a careful and diligent examination extending over a reasonable period of time, the result might easily have established the identity of his mental unsoundness and have saved the embarrassment of the expert testimony when later events demonstrated the fact that the accused was not a malingerer.

As notable an error as any recent one appeals to the writer in judging of the case of Doherty, who in all probability committed his murderous act as an impulse brought about after years of reaction to systematized delusions of persecution. After listening to the trial of this man and learning of the well grounded suspicion as to insanity, the writer was dumfounded to learn that the efficiency of the observation law was not to be tested. Since being sentenced to hang, the accused's counsel have pushed the case so faithfully and energetically that finally an appeal in the U. S. Supreme Court has resulted in granting a retrial and therefore a consequent recourse to the present observation law.

A FEW CASES OF ABDOMINAL SURGERY.

By C. E. Chandler, M. D., Montpelier, Vt.

Mr. President and Gentlemen:

I have written a brief account of four cases and given my experience in similar operations.

CASE I. APPENDICITIS.

M. Male, seven years of age. Had been ill one week with appendicitis, but was thought to be progressing favorably by the attending physician. There was no vomiting, very little pain, a normal pulse and a normal temperature. On the eighth day of the disease, however, the temperature was 103°; the pulse was 124, and very weak; the respiration was 40, and thoracic; the abdomen was greatly distended, tympanitic and the skin was oedematous; the veins were dilated; the lips, fingers and toes were cyanotic; the knees were drawn up; the face was shrunken. He vomited occasionally and complained of severe pain and

* Read before the Washington County Medical Society.

soreness in the abdomen. Thinking a fatal termination would follow within twenty-four or forty-eight hours, an operation was not urged upon the parents. At their request to operate, an incision was made over the usual location of the appendix, allowing about a quart of purulent fluid to escape from the peritoneal cavity. The appendix was seen to be ruptured and gangrenous and was removed. An encapsulated abscess was discovered about the right kidney. After this collection of pus was released, the abdominal cavity was flushed out with the normal salt solution and gauze drains inserted in different directions coming out through the lower portion of the incision. The child improved but the temperature and pulse remained above normal. Only a small quantity of pus drained out and a large amount was discharged at the dressings. Having seen a similar case in which the pus burrowed upward perforating the diaphragm and resulting in death, six weeks after operation, I thought it best to establish more complete drainage. Accordingly, about ten days after the operation, a two inch incision was made in the right lumbar region. On exploring the cavity with the finger, the kidney was found to be nearly dissected out by the pus. From this time, the pus drained out freely, the temperature and pulse remained normal and the child recovered rapidly. This case shows the advantage of a lumbar incision for drainage and the benefit of operation in acute general peritonitis.

Appendicitis with acute general peritonitis is nearly always fatal, yet as more cases recover with operation it seems to me to be the duty of the surgeon to operate unless the patient is in a moribund condition. Such cases bring discredit upon the operation as well as the operator, but it has been stated by one writer, that he considered it a cowardly action to refuse to operate. I have been unfortunate enough to operate in six similar cases, resulting in two recoveries and four deaths. In seven operations without general peritonitis but with unfavorable symptoms, that is, where the disease was running longer than usual, from one week to five or where there was a large abscess, or where alarming symptoms have developed, all of the cases have recovered.

Two operations have been performed where the diagnosis of appendicitis was made but proved to be incorrect. One of the cases was a ruptured pus tube without general peritonitis and a good recovery followed the removal of the tube and ovary. The other case which I saw on the seventh day of the attack and operated upon, was found to be a ruptured tubal pregnancy with acute general peritonitis. This patient also had a small retroflexed uterus and a large fibroid tumor. The sac, tube and ovary were removed but a fatal result followed the operation on the fourth day.

CASE II. DERMOID CYST OF OVARY.

Miss C., 35 years of age. Had been doing housework about fifteen years and was in fairly good physical condition, although she had lost several pounds in weight during the past few months. There was no history of a previous illness or injury. Heart, lungs and kidneys were normal and the temperature and pulse were natural. The digestive system was good. Had been troubled considerably by insomnia. Menses were normal. First noticed an enlargement of the abdomen about six months ago. An examination showed a tumor that occupied the central portion of the abdomen extending from the pubes to about three inches above the umbilicus. This tumor was hard, movable and dull on precussion. By vaginal examination the uterus was found posterior to the tumor and was movable separately. A diagnosis of ovarian tumor was made and an operation advised. After preparation, the abdomen was opened in the median line and the tumor, which was free from adhesions, was removed. The patient recovered rapidly without any rise of temperature or suppuration of the abdominal wound. This case is chiefly interesting because of the peculiar contents of the tumor which proved to be

a dermoid cyst of the right ovary. It was made up of a very thick sac, except upon the left side, where it had become thin and directly under this point, a portion of the contents had softened and in turn would probably have escaped causing fatal peritonitis. About three-fourths of the contents consisted of a thick cheese-like substance similar to that found in sebaceous cysts. There were several small globular masses covered with skin upon which numerous long white hairs were growing. On incision, the masses contained the same cheese-like substance. There were a great many long white hairs loose in the tumor. There was also a formation of bone, that appeared to be the united portion of the imperfectly developed superior and inferior maxillary bones, with teeth projecting in all directions and in all stages of development. There were about twenty-five teeth and several of them were loose in the tumor.

CASE III. STRANGULATED HERNIA WITH RESECTION OF SIX INCHES OF THE SMALL INTESTINE.

Mrs. J., 75 years of age. Had been in feeble health for several years on account of an irregular and intermittent heart and marked arterial sclerosis. Within two years she had been tapped several times for ascites. For a number of years a large tumor has been present in the left femoral region but at times it could be returned to the abdomen. She was suddenly seized with severe pain in the tumor, vomiting and rise of temperature. The attending physician made a diagnosis of strangulated hernia, but efforts failed to reduce it, even with the aid of an anaesthetic. I saw the patient on the third day of the strangulation and the tumor was about the size of the two fists—dull on precussion and with no impulse upon coughing. As there was no question as to the result if left to nature and as no physician is justified in leaving a fatal case without surgical interference, an operation was performed. A very large thick sac filled with dark reddish fluid was found anterior to the intestine. A small opening in the sac over the femoral ring showed the intestine to be of a black color. A portion of the small intestine was gangrenous and unfit to return to the abdomen. It was so softened that it ruptured when an attempt was made to find the constricting band. The sac was dissected out and about six inches of the small intestine was resected and the cut ends were united with a Murphy button. After cleaning the intestine with the salt solution it was returned to the abdomen and a small opening left in the wall for drainage. She bore the operation well, the pulse remaining strong but intermittent. In a few hours she appeared more comfortable than before operation. The family lived in a small tenement with very few rooms, which made an unfavorable place for operation and after-treatment. The patient had not the services of a trained nurse. I learned from the attending physician that she had no symptoms of peritonitis or septicaemia or intestinal obstruction but that she took very little nourishment, that the heart became weak and failed gradually and that death resulted on the sixth day after operation.

Eight cases of strangulated hernia have fallen under my observation. Two were of the umbilical variety, three were femoral and three were inguinal. In four of the cases the gut was simply strangulated and resumed its natural color after the constriction was divided. They all recovered in about three weeks with no unfavorable symptoms. These cases were operated upon within twenty-four hours of the commencement of the strangulation and the results were simply due to early operation.

The remaining four cases were operated upon after the second day and the intestines were gangrenous. Only one case recovered and in this case the gut was not returned to the abdomen but the constriction was divided. The whole gangrenous portion including the skin sloughed and the patient made a slow recov-

ery. In one case, which lived four days, the intestine was opened and gauze packed around it. In one case the intestine appeared much better color after dividing the ring and the gut was returned but death took place in about twenty-four hours. The history of the fourth case has just been given. These cases with four recoveries in four cases where the parts were not gangrenous, and one recovery in four cases where the strictures were gangrenous, indicate immediate operation if the hernia can not be reduced.

CASE IV. CARCINOMA OF THE RECTUM WITH RESECTION.

Mrs. S., 54 years of age. American, mother of six children. Had no history of hereditary disease or serious illness. Usually enjoyed good health but during the last year has gradually lost between twenty and thirty pounds in weight. Has suffered from constipation and been obliged to take large doses of salts to obtain an operation of the bowels. Quite often a small quantity of blood escaped with the movements. She had two small hemorrhages and at times severe pain in back and rectum. These symptoms were attributed to piles and no physician was consulted until quite a severe hemorrhage occurred. At this time a rectal examination revealed a carcinomatous growth about four inches from the anus. This involved the rectum in an annular manner reducing the caliber of the intestine to about one-fourth of an inch. The growth was soft, friable and bled very easily. Nothing abnormal except the rectal growth was discovered by vaginal examination. The other organs were free from disease; the temperature and pulse were normal. The case appeared to be a favorable one for operation and resection of the rectum was performed after the method described by Roswell Park.

Three or four days of preparatory treatment are necessary to empty the intestinal tract. The incision is made two inches to the left of the middle of the sacrum slanting it to the median line and extending it, if necessary, to the anus. The periosteum is separated from the sacrum and coccyx to prevent hemorrhage which might be very troublesome. The last two sacral vertebrae and coccyx are removed either with the chisel or the bone forceps. The rectum is separated on each side, the peritoneal cavity is opened, the intestine is pulled down and out through the incision. The meso-rectum is cut or torn as little as possible because the blood supply to the intestine is diminished thereby increasing the danger of sloughing. The intestine is severed about one inch above the growth. The lower portion is then dissected out with the fingers and cut if possible about the same distance below the cancer. A choice of three methods can then be made: unite the cut ends of the intestine if any is left below or bring down the intestine to the skin and make an artificial anus, in the natural place in the perineum, or bring out the gut below the sacrum and suture it to the skin.

An anus made by this last method is very annoying to the patient as there is very little control over the evacuations.

On account of the danger of sloughing when the intestine is sutured or the Murphy button is used, I decided to bring out the intestine below the cut end of the sacrum and suture it to the skin. It is called the safest and simplest method. If it is the intention of the operator to unite the ends of the intestine a preliminary colotomy might be done to prevent the faeces from passing over the united surfaces until they are firmly healed. If necessary an operation can then be performed to close the fistula.

The patient made a good recovery in a few weeks and two and one-half years have elapsed since the operation without a recurrence.

The benefit of the operation is shown by prolonging the life of the patient if not in recovery from the disease. It is said to be characteristic of carcinoma of the rectum to be well advanced before its discovery by the physician and this case proved to be no exception.

I have seen one other case of rectal carcinoma about the size of a hen's egg, attached to the anterior wall two inches from the anus. I was able to do a partial resection of the intestine through the anus which was widely dilated. About fifteen sutures were necessary to unite the divided intestine. The patient has been three and one-half years without a recurrence.

INFANTILE MORTALITY.

By E. M. Brown, M. D., Sheldon.

While death at all ages of life is present in our midst, there are two periods in which its dangers are especially imminent—that of infancy and old age.

Death, however, at a ripe old age does not seem half so grievous as it does when it snatches life from the infant; a being created and endowed with an organism which, if properly nourished and protected, is good for a period of seventy or eighty years of usefulness and progressive possibilities. The present enormous rate of infantile mortality is a blot upon the intelligence and scientific research of the nineteenth century. Vital statistics tell us that not more than fifty per cent of all babies born into the world ever reach maturity; and that does not include the large per cent of still-born, premature and abortives who never see the light.

In England there is one death in every five births before the child has a year of age.

In France twenty-one and seven-tenths per cent die by the end of the first year, and out of over sixty thousand births annually in Paris, the half die before they reach four years of age, and in the poverty-stricken classes the death rate is much larger—even seventy or eighty per cent. In Greater New York, with a birth rate of almost seventy-five thousand, nearly twenty thousand die the first year.

* Read before the 88th Annual Meeting of the Vt. State Medical Society.

Dr. Routh, in his manual of "Infant Feeding," asks: "Now is this mortality a necessary evil? I believe not; and to prevent by any means the great infant mortality is a work well worthy of a philanthropist."

Dr. Henry D. Baker, secretary of the State Board of Health, Michigan, writes in his most excellent report of 1897: "Infantile and child mortality is a great waste of the human emotions; also a great waste of money. The losses are incurred before opportunity has come for any pecuniary return." "Humanity and public economy unite in dictating that all preventable infantile mortality shall be prevented." "I believe it is true that vital statistics and sanitary science lead us to the belief that a large proportion of the infantile mortality is preventable."

Dr. Hugh Jones in a prize essay (written some years ago), tending to prove that infantile mortality is largely due to ignorance, produces a table, showing that in New England and the Middle States the infantile mortality from cholera infantum and diarrhœa was in proportion to the illiteracy of the parents.

Within the past few years many of our large cities have, with scientific and systematic inspection and supervision of the milk supply, materially diminished the death rate in children.

The present, it seems to me, is the beginning of an age when the true value of infant life is to be appreciated. If the old Anglo-Saxon stock is to be perpetuated, more babies *in this line* must be born, and fewer babies die after they are born; and it is in the province of the medical professor to educate the people, and to provide means to this end.

It was my purpose when I started out with this short paper to show, by a statistical collection and report, the difference in the rate of mortality between the infant fed upon the breast and those artificially fed. But I find that such statistics are difficult to obtain. In fact, by persistent effort for over a year, I could find very little directly on this subject.

I am convinced, however, by the recorded opinions of different authors upon children's diseases, that such a record would be very instructive, and, I think, surprising to most of us in its showing. I wish as a State we might take the initiative in this comparison and compilation. It is plainly nature's law that every woman should bear children; and that every mother should suckle her babe. That there are exceptions to this law does not lessen the obligation for those who are qualified for such duties; and the benefit to the healthful mother by lactation is secondary only to that to the infant at her breast.

Rotch says that "hand-fed children are much more likely not only to be weakly and improperly developed,but also that the chances of life are much smaller for them than for children who are suckled by a healthful mother."

Prof. Caille, of the New York Post Graduate, in a personal letter, conservatively writes: "About twenty per cent of acute gastro-enteric troubles occur in children at the breast, and the mortality is three to four times greater in bottle-fed babies. The power of resistance to all forms of disease is greater in breast-fed children."

Dr. Lewis Starr in his American Text Book on Diseases of Children, writes that "feeding from the maternal breast, being the natural, is the proper method of nourishing the human infant, and every mother who is able should nourish her child solely from the breast up to the age of eight months, and partially to the end of the first year, or, failing in either limit, do so as long as possible."

Dr. Vaughan of Ann Arbor, Mich., writing upon infant feeding, says: "Treatment intelligently carried out would save thousands of lives annually in our large cities. The best of all these measures is that the mother should nurse the child, and the mother who allows anything short of absolute inability to prevent her doing so, places the life of her child in jeopardy."

Dr. Alexander Briggs of Rhode Island says: "It is estimated that over seventy per cent of deaths from all causes in children under two years of age are due to some abdominal disease, and of this number over thirty per cent are due to some disease arising from defective and faulty nutrition, and many times the healthiest children, when deprived of breast-milk during the first year of life, succumb to those diseases."

These opinions are verified and emphasized by every writer upon children's diseases, and writers also concur in the opinion that the temperature of the weather has a positive and direct bearing on the mortality rate of children. September, August, July and October are the months in which there is the greatest mortality from alimentary troubles, and are named in the order in which the greatest mortality occurs.

In the Michigan State Report of 1897 there were deaths reported from cholera infantum during these four months to the number of 734, the rest of the year 156; from diarrhœa 200, in the other eight months 34. In Vermont during the year 1900 from cholera infantum in September 57, August 53, October 22, July 17; total during these four months 149. In June there were 8, and the rest of the year 16, making a total of 173 deaths, and of these 169 under five years of age. How many under two years of age is not given, but I will vouch that it would include more than three-fifths of the total number, the first and second summer being the danger time.

Infants, however, who are fed only on mother's milk do not die in hot weather in anywhere near the same proportion as do those who are not nursed. Hot weather acts upon the bottle-fed baby in two ways; first, and I presume most frequently, by changing the food before it is taken into the system; and secondly, by reducing the vitality and digestive powers of the infant. It is true there are very few children who have breast-milk during the second summer, but I think the child who is

nourished at the breast up to ten or twelve months will be much less prone to succumb to disease incident to hot weather of the second summer than those who were not.

Prof. A. Jacobi, speaking on cholera infantum, says: "How does heat affect the babies, directly or indirectly? Its indirect effect is best appreciated when it is remembered that breast-fed babies do not suffer like those artificially fed. In the vast majority the feeding is artificial, and with but few exceptions the attacks occur during the hot months of summer." Prof. Memert's observations in Dresden during eleven hot summer weeks noted 18 deaths in babies wholly breast-fed, to 460 not so fed—or only about 4 per cent, which agrees, I think, with what every observing practitioner learns from his own experience.

Again referring to the table of Dr. Baker: Of 4,181 deaths reported under one year of age, 671 were from cholera infantum, 316 from convulsions, 146 from diarrhœa, 103 from inflammation of bowels, 90 from disease of bowels, 49 from disease of stomach, making a total of 1,375, or about 33⅓ per cent from diatetic trouble.

Again quoting Prof. A. Jacobi: "The most important preventive of cholera infantum, as of other intestinal diseases or disorders, is appropriate and digestible food. In the vast majority of cases this is, *for the poor infant, human milk.* What I have said a hundred times is still true and borne out by fact; viz., that no matter how beneficial boiling or sterilization or pasteurization may be, it cannot transform cow's milk into woman's milk, and it is a mistake to believe that the former by mere sterilization is a full substitute for the latter.

"It is true that when we cannot have woman's milk, we cannot do without cow's milk. There is no allowed substitute that can be had with equal facility or in sufficient quantities. But after all it is not *woman's* milk. Babies may or may not succumb from using it, but they seldom appear to suffer from it; indeed they will mostly appear to thrive on it, but it is a make-shift after all, and requires modifications."

Hammarston was among the first to prove that there was a difference chemically between the casein of cow's milk and woman's milk. Wrobolewske demonstrated the difference in solubility of the two milks. Woman's casein retains pepsin during digestion, its nuclein in solution and is fully digested. While in cow's milk casein is not fully digested, a paranuclein is deposited undissolved and undigested. "In cow's milk the phosphorus of the nuclein amounts to six per cent of the total amount of phosphorus contained in the milk; in woman's milk forty-one and five tenths per cent. That means that in cow's milk not one-half of its phosphorus is in the organic combination of casein, and in woman's milk almost all of it is. In cow's milk the phosphorus not utilize is contained in the inferior phosphate."

Quoting from E. Salkowski: "These conditions are evidently of the greatest moment in the nutrition of nurslings,as the development of bones is more readily accomplished in nurslings fed on woman's milk. The probable conclusion is that nuclein has an important part in the absorption and assimilation of phosphorus."

And again Jacobi says: "Though woman's milk contains less casein than cow's milk, more casein is utilized out of the former, and the nuclein is evidently an important factor in its absorption also."

The conclusions which we draw are that the chemical ingredients, which enter into combination to form milk, are so proportioned and subdivided as to be emphatically adapted to the development of its peculiar kind and species. While the calf, with its powerful digestive ferment and active peristalsis, is able to dissolve the nuclein and completely digest and assimilate it, the human babe, with a much weaker digestion, may be able to digest and assimilate very little of it, and particularly so when the vitality is reduced by the hot weather of summer. And that which is *not* digested

acts as an irritant, and often as a violent toxin to the system.

During the cooler months of the year, artificial food, intelligently and methodically prepared and administered, may do very well, but with the careless and indifferent mother or attendant, the babe is always subjected to danger.

I cannot refrain from saying a word about the nursing bottle. If the baby is and must be bottle-fed, the physician should lay particular stress on cleanliness and insist that the bottles be sterilized. The bottle with long rubber tubing and nipple attached should at all times and under all circumstances be condemned as unfit for the use designed. In some State (I think New York) there is a law prohibiting the use of this attachment, and if such a law existed and was enforced in Vermont, babies' lives would be saved.

The doctor feels very different when called to see a baby suffering with either acute or chronic gastro-enteric trouble, if that child is on the breast, than he would if subsisting in any other way, and his prognosis would be very different also. Could mothers know and appreciate the danger to which they subject their children by refusing to nurse them, they would be much more willing to submit to the confinement and inconvenience attending lactation.

Substitute for a Real Steam-bath.—When the steam-bath is indicated in country practice it is easily and satisfactorily given by boiling a dozen or more ears of corn, taking them from the water while boiling, wrapping in cloths moistened in hot water, and packing them as close to the patient as possible. Keep him closely covered, and a few moments will bring the most profuse perspiration you ever saw.—*Ex.*

GALL-STONES AS A SURGICAL AFFECTION.

By S. H. Weeks, M. D., Portland, Me.

(*Continued from June number.*)

Surgical Treatment.

The operations upon the gall-bladder and bile ducts that may be necessary are, cholecystotomy, cholecystectomy , choledochotomy, cholelithotrity, and cholecystenterostomy.

Cholecystotomy is the simplest and safest of all operations on the biliary passages.

Before describing the operation, it may be well to state the indications for operation in cholelithiasis. The following indications are given by Mayo-Robson:—

1. In frequently recurring biliary colic without jaundice, with or without enlargement of the gall-bladder.
2. In enlargement of the gall-bladder without jaundice, even unaccompanied by great pain.
3. In persistent jaundice ushered in by pain, and when recurring pains render it probable that the cause is gall-stones in the common duct.
4. In empyæma of the gall-bladder.
5. In peritonitis starting in the right hypochondriac region.
6. Abscess around the gall-bladder, or bile ducts, whether in, under, or over the liver.
7. In some cases, where, although the gall-stones may have passed, adhesions remain and prove a source of pain and illness.
8. In fistula; mucous, muco-purulent, or biliary.
9. In certain cases of jaundice with distended gall-bladder, dependent on some obstruction in the common duct.
10. In phlegmonous cholecystitis and in gangrene; if this can be seen and recognized at a sufficiently early stage of the disease.

In performing the operation of cholecystotomy, an incision three inches long is made from above downward from the tip of the tenth rib, along the outer border of the right rectus muscle. This can be extended if need be.

The gall-bladder will always be found presenting when the abdominal cavity is opened. If there have been several preceding attacks of inflammation, the gall-bladder will probably be

wrapped about and often hidden from view by adjacent viscera, the colon often presenting first. These adhesions must be carefully separated, exposing the gall-bladder to the cystic duct. The bladder should be aspirated of its contents as a rule, although this is not absolutely necessary. Before this is done protecting gauze should be packed around, shutting off the subhepatic space from the rest of the abdominal cavity. The gall-bladder should then be incised in the direction of its long axis and near its fundus, sufficiently to allow the finger to be introduced for exploration. The finger will detect the stone when nothing else can. I have frequently found that a probe, director or even forceps, will fail to detect the soft cholesterin stone. The finger alone is of use, and guided by this, a pair of good-sized dressing forceps with broad spoon-shaped blades, constitutes the best instrument for extracting the stone. Bile continues to flow back into the bladder during the operation, if the cystic duct has been thoroughly cleared. Search should always be made by the finger along the common duct to detect the location of another lower calculus. All possible care should be used to prevent the entrance of the bile into the peritoneal cavity, yet all recent works tend to show that the escape of bile into the peritoneal cavity is not in itself a dangerous event, provided no septic influence is superadded. This is especially shown by a case reported by Hans Kehr, in which the apex of the gall-bladder was shot off by a bullet, and one in which Thiersch removed 40 pints of bile from the peritoneal cavity after rupture of the gall-bladder. In both cases there was perfect recovery. Dr. G. B. Davis of Birmingham, Ala., described to the American Association of Obstetricians and Gynæcologists, a large number of experiments which he had made on dogs to test the value of gauze in draining off bile in injuries of the gall-bladder and ducts. He had removed the gall-bladder, without tying the duct, and protected the peritoneal cavity by packing with gauze. The animals all recovered.

In another instance he incised the gall-bladder and ducts and packed with gauze around the openings, no stitches being used, and all the animals recovered. Complete walling off of the general cavity in about forty-eight hours had been noted when the abdomen of animals had been opened. Dr. Davis reported the case (and many of us could report similar cases) of a man in whom he had removed the gall-bladder and a portion of the cystic duct, where there had been obstruction in the common duct, and packed with gauze after introducing a drainage tube, and there had been complete walling off of the general cavity.

He advised that, in cases of obstruction of the common duct, no attempt should be made to suture the opening after the obstruction had been removed, as the patient's condition was nearly always serious and a prolonged operation would terminate fatally. The obstruction should always be removed if possible. His experiments demonstrated that the peritoneum was capable of bearing the presence of a small amount of bile, but that large quantities, or the constant extravasation of it, would produce fatal peritonitis, usually in from twenty-four to forty-eight hours.

It is often impossible to make an accurate diagnosis, and the surgeon must be prepared to alter the whole plan of procedure at any moment. If he undertakes to explore the gall-ducts for stone, he may find none; he may remove one or many gall-stones from a gall-bladder with the greatest ease; he may get at a stone deep in the abdominal cavity, and may have great difficulty in removing it; he may be obliged to separate attachments of the duodenum so as to turn the viscus downward or inward; he may find the stone pressing against the thin layer of pancreatic tissue covering the hepatic duct to the inner side of the descending portion of the duodenum, and may have to cut down on it in that position, or he may have to open the duodenum in front and behind to accomplish his object. After the gall-bladder has been opened and the stone removed, the

important question arises how to deal with the gall-bladder; shall we stitch it to the opening in the abdominal wall, as has been most frequently advised and practiced, or shall we close the opening and return it into the abdominal cavity? The ideal method is to suture the bladder incision by a double row of Lembert sutures and return to the abdominal cavity. I have done this several times with great satisfaction. This cannot be done in all cases; only in the simple cases when the bile channels are freely open and the walls of the gall-bladder in a healthy condition. After suturing the bladder incision, I am in the habit of inserting a wick of sterilized gauze down to the gall-bladder and closing the wall incision, excepting where the gauze is left protruding; here one stitch is left untied. The gauze is allowed to remain forty-eight or seventy-two hours, when it is removed and the suture tied thus closing completely the abdominal incision. Where it is not possible to make this ideal operation, the opening in the bladder must be brought to the peritoneum by sutures, and a rubber drainage tube put into it and secured by a stitch or a safety pin. The lower part of the wound should be closed up to the open bladder, and ample provision made for a discharge of bile. After ten days the drainage tube is unnecessary, as the bile will flow spontaneously. In two weeks a pad may be placed over the sinus to partly dam back the bile, and if it appears in the stools, a firmer pad and strapping will close the sinus by the end of three weeks.

If the discharge continues many weeks, it is proof that some stone has been left either in the bladder, which is often sacculated, or in the common duct. It is well to wait some weeks before operating again, for nature will often work the calculus back by reverse peristalsis and discharge it at the fistula. I have had this happen in one of my own cases. It is sometimes necessary to remove the gall-bladder altogether. Cholecystectomy is not a difficult operation, the gall-bladder being separated from the under side of the liver by blunt dissection which gives no serious hemorrhage. A ligature is placed about the cystic duct, which permits its removal. In performing this operation, it should be remembered that it destroys a channel by which the bile may reach the surface when there is deep seated trouble. It may be practiced with advantage in early malignant disease, or when chronic atrophy has left a distorted and pocketed bladder. If we regard the gall-bladder as the origin of gall-stones, this is a legitimate proceeding, but it would seem that a shriveled lining ceases to perform its function, and hence cholesterin-forming material is not to be feared. On the whole, it is better not to remove it. If we are sure all calculi are removed, the sinus will close quickly and the duct atrophy.

Choledochotomy, or incision into the common bile duct, is a most important and interesting operation. If one keeps in mind the anatomy of this region, it is evident that by the same incision as for gall-bladder operations, the deeper parts can be exposed. It is well to raise the shoulders and lower the hips of the patient to cause the transverse colon and small intestines to fall away from the field of operation. The liver being held up by an assistant and the colon drawn to the median line and downward, sterilized gauze having been placed on the median side and again in the kidney space, an incision of the peritoneum of the posterior wall si made from the cystic duct downward on the outer side of the duodenum toward the kidney. Through this the finger is introduced and the first and second parts of the duodenum are lifted up so that their under side can be explored, also the head of the pancreas and the common duct at its lower part. If a stone be felt in the upper or middle part, it may be reached and easily isolated. The common duct lies upon the portal vein, and the cystic artery lies alongside of it. The distention of the duct by a stone, gives little risk of cutting back of it. An incision

in the length of the duct will allow the stone to be easily removed.

The wall of the duct is much hypertrophied where it envelopes the calculus, as if its muscular coat had been developed in its efforts to push the stone forward. With a good needle-holder and a curved needle it is an easy matter to suture the duct with a continuous suture. If the patient's condition or other circumstances do not justify a prolonged operation, it is perfectly good surgery to press the walls of the incised duct together by a strip of gauze folded and packed down upon it, its end being brought out of the external wound, and to place alongside it a rubber drainage tube. In a few days all adjacent viscera will be sealed about it by lymph, thus excluding the bile from the peritoneal cavity. In two or three days the tube and gauze can be removed and the tube alone replaced for ten days.

Cholelithotrity.

If a calculus is felt in the common or cystic duct, the surgeon should first attempt to crush it by finger pressure, which will break up soft stones. If it proves too hard he should try to crush it with compression of flat forceps, a piece of rubber tube being drawn over the end of each blade. Pressure that will not injure the duct will often crush the stone, and it may be left to nature to be carried off, or finally, a round needle may be used to prick the stone to bits through the walls. We are indebted to Lawson Tait for this method. These methods are all often successful and harmless, except in large or hard calculi. These methods failing, the duct should be incised and the stone removed through the incision.

Cholecystenterostomy.

The union of the intestine to the gall-bladder becomes necessary in some cases of obstruction of the common duct, to form a biliary fistula to obviate obstruction. Method of operating: The gall-bladder and intestine having been freely liberated so as to be approximated, the gall-bladder is opened by an incision about one inch long through which the calculi are removed. A silk suture is applied around the opening to act as a purse string. One-half of a Murphy button is introduced and held "in situ" by clamp forceps, while the string is tightened around the stem. The same steps are taken on the duodenum. This being done, the two stems are telescoped, until the rims tightly fix the gall-bladder and intestine together. One difficulty which the surgeon will often meet with, is the fixedness of the duodenum in the depths of the subhepatic space. Under such conditions an anastomosis may be made with the colon which naturally lies at hand, and may safely be used for such purposes. The gall-bladder should not be joined to intermediate parts of the small intestine, as such an anastomosis is likely to lead to intestinal obstruction. In the absence of a Murphy button the anastomosis can be made by suture.

Deviation of the bile flow into the colon seems compatible with health, and is often more feasible than the duodenal route. Chronic obstructions of this sort are almost always accompanied by dilatation of the gall-bladder, so that approximations to either duodenum or colon are practicable. The essential point is to have an opening large enough to ensure permanence. Abbe recommends one and one-half inches. The diameter necessary to give exit to the normal secretion is very small. Vast quantities of bile will escape through an opening in the skin no larger than a pin head. The normal papilla has an aperture no larger. The contraction after anastomosis must be practically complete to arrest the natural daily flow.

Conclusions.

Gall-stones very generally are formed in the gall-bladder, but sometimes they form in the ducts and in the biliary passages of the liver.

Their formation is the result of obstruction of the biliary passages and inflammation of the mucous membrane, cholesterin and bile pigment being deposited from the stagnant bile. Micro-organisms are the foundation of the morbid changes. They often cause inflamma-

tion of the gall-bladder and ducts, and sometimes ulcers, which may perforate and result in abscess.

Symptoms.

Gall-stones may exist without symptoms; when they become impacted in the gall-ducts, they give rise to sharp colicky pains in the right side, shooting backward under the scapula, lasting from a few minutes to several hours or days, and sometimes followed by jaundice or by signs of peritoneal inflammation in the region of the gall-bladder. Jaundice occurs only when impaction takes place in the common duct. Stones sometimes lie in the common duct and increase in size until they are too large to pass into the intestine, when they may cause typical biliary colic and jaundice. Jaundice is a much more common symptom in tumors of the gall-bladder than in cases of gall-stones, and there is no history of gall-stone colic.

Surgical Treatment.

Surgical interference is indicated when the attacks of colic are very frequent and severe, when the jaundice is very marked, and when there are signs of suppurative inflammation in the gall-bladder or its neighborhood.

Severe cholæmia is apt to weaken the heart and predispose to hemorrhage, but jaundiced patients as a rule bear operation well.

If a calculus is impacted in the cystic duct, the gall-bladder is to be opened and the stone removed. If this is impossible, the calculus may be crushed by forceps in the duct, or may be crushed by padded forceps outside of the duct, or by a needle inserted through the wall, and the fragments removed. When the stone has been removed the bladder may be sutured by Lembert sutures, if it is healthy and if no obstruction exists in the common duct. After suturing the bladder and dropping it back into the cavity, I am in the habit of inserting a wick of sterilized gauze for forty-eight or seventy-two hours. If there is no leakage at the end of this time, I remove the gauze and tie the stitches that are put in and left untied at the time of the operation. If the bladder is diseased, it may be drained be securing the edges of the incision to the abdominal wound or it may be removed altogether. If the stone is in the common duct, it should be incised as has already been indicated, and the stone removed, the incision being sutured, or drained when suture is impossible.

Before incising the common duct, an effort may be made to push the stone back into the bladder or onward into the intestine. A soft stone may be crushed with padded forceps, or broken by needle puncture. McBurney has successfully removed a calculus from the common duct by incising the duodenum and stretching or incising the intestinal orifice of the duct.

When there is a permanent obstruction in the common duct, it is absolutely necessary to secure an outlet for the bile, which may be accomplished by making a permanent external fistula, or by making a communication between the gall-bladder and the bowel, either the duodenum or colon. This may be done by suture, or by the Murphy button. The operation by suture has had a mortality of thirty per cent, whereas Dr. Murphy has collected forty-seven cases in which the button was used with only two deaths.

Courvoisier and Fenger have given much painstaking consideration to gall-stones in their practical aspect. According to their investigations one stone is found at the duodenal end of the common duct in sixty-seven per cent, at the hepatic end in fifteen, and at the middle in eighteen per cent of the cases.

One stone is present in two-thirds of the cases; in one-third, two and even as many as six may be found. In the instances of single stones the size varies from one to four-fifths of an inch in diameter.

In ninety-seven cases of cholelithiasis, stone was present in the gall-bladder alone in eighty-four per cent, in the gall-bladder and common duct in ten, and in the common duct alone in five per cent of the cases.

SPECIAL THERAPEUTIC ARTICLES

ASPIRIN IN PEDIATRIC PRACTICE.

By Dr. S. Gottschalk.

As far as I am aware no detailed report has as yet appeared on the action and use of Aspirin, the acetic acid ester of salicylic acid, in the treatment of diseases of children. While its field of action is synonymous with that of salicylic acid it has been of interest to prove whether it acts in the same manner and as promptly and reliably as the latter, and furthermore, whether it possesses properties which entitle it to preference over the salicylates. According to many observers aspirin is an efficient remedy in diseases of a rheumatic nature, diminishing the pains, fever, and swelling. It is asserted to be free from the irritating effects of salicylic acid upon the gastric mucous membrane, because it is practically not decomposed by acids, and therefore passes unchanged through the stomach, to be split up into its components in the alkaline intestinal juice. Tinnitus aurium has been noted in only very rare instances, although attention has been directed to the fact that it may produce a condition of great weakness in cases in which there is an abrupt fall of temperature. Occasionally, also, it has been found that it has an unfavorable action upon the heart. Like all other salicylic acid derivatives it produces a profuse perspiration. It must be particularly mentioned, however, that it tastes much more agreeably than the salicylate of sodium.

In the polyclinic for diseases of children of Dr. Neumann aspirin was employed in 30 cases of various affections of childhood, 20 of the patients suffering from influenza. The age ranged between 4 and 14 days, three of them being younger. The symptoms comprised the sudden development of feverishness, headaches, loss of appetite, cough, and sneezing. Examination usually revealed only the presence of high fever and a few isolated rales, but nothing else. Seven of the children were withdrawn from further observation, but in the remaining 13 aspirin produced a very prompt reduction of fever, either at once or at the latest within three hours. The apyrexia was usually preceded by a profuse sweating. The other subjective symptoms caused by the influenza also showed a rapid amelioration.

Of rheumatic affections we treated with aspirin muscular and articular rheumatism, and peliosis rheumatica. It proved equally as satisfactory as sodium salicylate in these cases. Although in two cases of pleurisy with effusion we were unable to note any favorable action from the prolonged administration of aspirin, the same was true of the salicylate of sodium, which, in our experience, has manifested no decided influence in cases of pleuritic effusions.

Aspirin may be taken for long periods without any injurious by-effects. Thus, for instance, in two cases of chorea minor, we gave aspirin for a long time in daily doses of 30 grains. It is possible, however, that in excessive doses the unpleasant symptoms of salicylic acid may be developed, although we were able to observe them only in two instances.

As we have largely prescribed aspirin for the relief of fever and headaches of various kinds, especially in influenza, rheumatism, rheumatoid affections, and chorea, we feel warranted in stating that it is easily taken by all children who are able to swallow powders, and does not disturb the stomach. In its action aspirin is equivalent to the salicylate of sodium and can be administered in the same doses. The maximum dose in older children varies from 30 to 45 grains daily.

Deutsche Med. Wochenschrift, July 25, 1901.

NATHANIEL P. DUFFY, M. D. University of Vermont, Burlington, 1888, died at his residence in Lubec, Me., June 4.

ERGOAPIOL (Smith) IN DISEASES OF THE FEMALE.

By Charles H. Shepard, M. D.

Physician to Lincoln Hospital, Durham, N. C.

A deep and general interest is attached to all knowledge pertaining to the treatment of common diseases of the uterus, to which women are subject, and a vast literature is the outcome of this profound and focussed interest. We live to-day in an age of transition—a period of change. A great many of the former theories in medicine are fast passing away. New medicines are made, achieve a short-lived success, and then pass on to obscurity. This is true most especially in medicines for gynecological diseases. Of the newer remedies it is hard indeed to get one that may be depended upon for long. They soon lose their reputation and potency and are relegated to the past.

We know that all diseases of the womb have not the same etiology nor the same pathology, therefore they should not all have the same treatment. Far too often the general practitioner groups all these diseases together as one and gives the routine treatment. It is not enough to give anodyne medicines for dysmenorrhea no more than it is sufficient to treat alike all forms of dysmenorrhea.

The operation of curettement has a most important place in these conditions, but like other remedial agencies it has its limitations. When we curette the uterus we rid it of a pathologically obnoxious lining membrane, and afford a normal membrane the opportunity to be formed.

The healthy woman with normal genitalia menstruates regularly and painlessly once a month from puberty to the "turn" of life, except that this regularity is interrupted by pregnancy and afterwards by lactation. Any departure from this rule constitutes an abnormality. Amenorrhea is less frequently met with than dysmenorrhea and irregular menstruation. The present age of transition has brought forth what is popularly known as the "new woman," and she has brought with her new ideas and practices which in very many cases retard growth and the natural process necessary for perfect health. For leaving the old landmarks, she has to suffer.

The most generally useful medicine in the conditions of amenorrhea, dysmenorrhea, irregular, scanty and fetid menstruation, in my judgment, is a preparation of the Martin H. Smith Company of New York, known as Ergoapiol (Smith). In the female ward of the Lincoln Hospital, Durham, N. C., I have used this medicine very extensively, and it has not only never failed to benefit and cure, but I know no remedy with which I could replace it were I deprived of it. Its efficacy may be tested by any physician who properly tries it. I mention a few cases with short description of each, in which it has given the most signal benefit in my hands.

Ergoapiol (Smith) is put up as a small capsule, and is made up of a special form of apiol which is of the very highest quality. Combined with this are some other most valuable hemagogues and they all go to make a fine preparation. It seems to be a scientific pharmaceutical preparation, non-toxic, tonic, as well as emmenagogue. What I have to say of this preparation is based entirely upon clinical experience, and I feel safe in saying that it will bear a clinical test whenever properly administered.

REPORT OF CASES.

No. 1. Mrs. F. was admitted to hospital September 15, 1901; married; no children, though she had been married four years. Had not menstruated for 7 years. Womb had been curetted several times; suffered from leucorrhea; pains in right and left iliac regions continuous. Examination showed a very small os, but generative organs were otherwise found to be normal. Another curettement failed to bring on the menses. I then prescribed Ergoapiol (Smith) to be taken one globule three times a day, and afterwards increase to one globule four times a day. After seven days of this treatment she complained of a general

feeling of stiffness in her limbs, gaping and a feeling of malaise. The following morning she found to her delightful surprise that she was menstruating for the first time in seven years. At that time the flow was somewhat scanty, but the treatment was continued through three periods. Each succeeding period was more nearly normal than the one that preceded it. Now her functions are regular and I know no reason why she may not become pregnant.

Case No. 2. Mrs. S. complained of a continuous, dull, dragging pain, situated in the region of the iliac fossa of the right side. Menstruation irregular, scanty, fetid. Married six years; had never been pregnant. Excessive leucorrhea, though otherwise she was perfectly normal. Her weight was 140 pounds. Her condition, and the suffering, both physical and mental, which it occasioned her, was rapidly undermining her health. She was becoming emaciated, appetite of no consequence, general weakness. She considered her condition "hopeless." Cardiac weakness, of which she was a victim, contra-indicated curettement—which usually cures "whites" and allows the formation of a healthy lining membrane. Ergoapiol (Smith) was prescribed for her, one capsule three times a day. In conjunction with this I gave tonic medicines. After six weeks' use of this remedy, the woman said she was "feeling so good" that she did not need any further treatment. She had increased in weight and her appetite had become all she could wish. The menstrual flow was increased, and now, five periods having elapsed from the time treatment was instituted, her monthly flow has failed to appear. She does not expect its return for some time—supposing herself pregnant.

No. 3. Miss S. Suffered severe pain each month beginning a day before the flow came on. The flow was a thick, clotted mass, consisting of membrane and the menstrual blood matted together. She had suffered from puberty, and the suffering became more intense as the years passed on. She was 19 years of age, stout, of healthy parentage. Admitted to Lincoln Hospital January 15, 1902. She declined an operation. I afterwards prescribed Ergoapiol (Smith) and have continued it for one month. Her next menstruation was free and easy, painless and regular. I doubt not that keeping up this treatment up to another period she will be entirely rid of the hitherto troublesome condition.

No. 4. Miss W. Tubercular history. Menstruation very irregular, sometimes three, sometimes five weeks between periods; very painful; scanty. I prescribed Ergoapiol (Smith) one capsule four times a day beginning one week before the menstrual period and continued a week after the period. As a result of this treatment the patient feels a great deal better in her general health; her monthly flow has been rendered painless and increased in quantity. Ergoapiol has a tonic action upon the muscular fibers of the womb. Its effect is not transitory but lasting. This superior preparation is decidedly tonic.

No. 5. Mrs. D. A., victim of endometritis. Pain continues between periods and is aggravated at periods. Leucorrhea was very pronounced; pains in the back; "hot flashes;" vertigo, headache. Patient would not allow an operation; highly sensitive. Several preparations were tried, but none gave relief until Ergoapiol (Smith) was used. It has entirely relieved the patient, and she is now loudly singing its praises. In this case treatment was kept up for ten weeks.

Ergoapiol has never failed in my hands. It is not possible that it can cure obstructive dysmenorrhea, but with that exception it is indicated in all the other diseases of the womb where a tonic and sedative action is the requirement.

Case No. 6. Mrs. D., widow; aged 33; had three children; youngest 10 years of age. She had suffered all her menstrual life severe pains in the pelvis at each period; had to keep in bed a week or more each month; paroxysms of pain were followed by a flow of the "whites;" no anemia; womb found to be flabby and relaxed; pains extended down thighs posteriorly. Had been treated for many years by various physicians of note, but had received only temporary benefit.

Ergoapiol (Smith) was given her, one capsule three times a day, and increased at the time of the flow to four a day. After three months of this treatment her menstrual function became regular, and being entirely well now, she feels that life, after all, is worth living.

I could prolong this list indefinitely with records of cases that have been entirely relieved of these conditions, and I shall be pleased to furnish any information desired as to Ergoapiol (Smith) and its use.

Durham, N. C.

HYSTERECTOMY FOR CANCER OF UTERUS.

By T. J. Biggs, M. D.

Sound View Hospital, Stamford, Conn.

Mrs. T., aged 47, American. Diagnosis, carcinoma of uterus. Entered hospital Oct. 10, 1901, in a greatly run down condition. She was put on an absolute bovinine diet, until Oct. 14th, when at one o'clock she was given a high rectal injection of bovinine and salt solution, three oz. of each, and at two o'clock, under ether anaesthesia, I performed an abdominal hysterectomy. Just before the uterus was detached from the vaginal wall, the patient showed considerable shock, and consequently the nurse was ordered to give her another high rectal injection of bovinine and salt solution, two oz. each. She responded to this beautifully. The operation was completed by the closure of the abdominal wound, the pelvis being drained through the vagina. Patient was put to bed with the pulse weak and 112. She was given another high rectal injection of bovinine and salt solution, three oz. of each. In twenty-five minutes she was conscious, pulse greatly improved, being 100, and full in character. *No nausea, thirst or vomiting.* The second day the vaginal drain was removed, the wound and the vagina treated by injections of bovinine pure, employed t. i. d. Previous to every injection of bovinine into the vagina, the cavity was washed out with borax solution. These injections were continued three times a day up to Oct. 16th, when twice in twenty-four hours was deemed sufficient. She was now allowed a light general diet together with bovinine. Oct. 24th, the stitches were removed and the abdominal wound found to be healed. From this time on her recovery was uninterrupted and she was discharged cured, Nov. 16th.

NEWS, NOTES AND ANNOUNCEMENTS.

Washington County Medical Society.—The Washington County Medical Society, which was organized some two months ago, met at 2 o'clock July 1, 1902, at the State House, for the adoption of a constitution and by-laws. Physicians from nearly every town in the county were present. Dr. D. D. Grout of Waterbury, read a paper on "Obstetrical Introspection," and Dr. C. F. Camp of Barre, one on "Nuclein and Prontonuclein." Dr. C. E. Chandler of Montpelier, spoke of "A Few Cases of Abdominal Surgery," and Dr. W. D. Reid of Barre, gave an interesting talk on "Small Pox." The members of the society dined at the Pavilion at 6 o'clock in the evening.

The Burlington and Chittenden Co. Clinical Society.—The regular monthly meeting of the Burlington and Chittenden County Clinical Society was held at their rooms, June 27, 1902, at 8.30 P. M. The following programme was presented and discussed:

Middle Ear Disease with Reference to Mastoid, Dr. L. J. Paris.

Discussion opened by Drs. W. H. Englesby and M. C. Twitchell.

After Twenty Years with the Neuroses, Dr. A. J. Willard.

Keith-Williamson Wedding.—D. H. L. Keith, one of Milford, Mass.'s best known and most successful physicians, and a graduate of the U. V. M. Med. Dept., was married at West Upton, recently, to Mrs. Alice G. Williamson of that place. The ceremony was performed at the bride's home by Rev. Carl G. Horst, pastor of the Unitarian Church. The couple were unattended. Directly after the marriage Dr. Keith and wife left for East Barnard, Vt., to spend their honeymoon with the former's mother and sister. Upon their return they will occupy the Dr. Eaton house, so-called, corner of Main and Water street, which Dr. Keith recently purchased.

The Vermont Medical Monthly.

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BURLINGTON, VT., JULY 25, 1902.

EDITORIALS.

THE PASSING OF THE GENERAL PRACTITIONER.—The following editorial in the *Washington Post,* coming from a lay publication, is so sententious and true that we take pleasure in reprinting it:

"Medical practice is becoming so closely specialized and the ambition of a physician in our day to rank among the great professional lights can be so much better satisfied by devoting his energies wholly to a single and somewhat narrow field that the medical scientist has to a large extent replaced the old-fashioned family doctor. We are far from sure that the change has been for the better, taking in view the general interests of the community.

Fifty years ago there were specialists, but their number was comparatively small. They were called in for consultation now and then in a case which the ordinary physician found baffling, or with which, owing to some technical feature, he was reluctant to deal alone. Now the specialist might almost be said to be the rule and the universal practitioner the exception. If this is not already the case, it is rapidly becoming so. The patient first passes judgment on his own ailment. If he believes the seat of his trouble to be in the ear, he consults an aurist; if in the eyes, he goes to an oculist; if in some other organ, he finds his way to the physician or surgeon who makes a specialty of that. But the medical man who formerly played the part of general adviser is almost a stranger to him.

It stands to reason that there can never be quite the same relation of intimate personal confidence between the specialist and his patient that used to exist in the case of the family doctor who ministered to a whole household, bringing the children into the world, smoothing the pillow of the dying, and encouraging all between to come to him with their troubles of every sort. It was he who uttered the tactful warning where he felt even a suspicion, and who could do it without exciting fear, so sure were the patient and his friends that, whatever the disease, he could be trusted to stay its ravages.

The specialist could hardly do this, for the very fact of his forgetting etiquette so far as to invade a field not peculiarly his own would of itself be alarming. Nor does he make a lifelong study of any patient's constitutional traits, which often tell their story to the trained mind. It is questionable, therefore, whether, in view of the human tendency to overdo an attractive thing, it would not be well for instructors in the medical colleges to impress upon students the beauty and excellence of putting new life into the time-honored system now threatened with decay."

MEDICAL ABSTRACTS.

CASTOR OIL IN TYPHOID FEVER.—Dr. C. C. Bass, of Columbia, Miss (*Mississippi Medical Record,* April) reports his experience in the treatment of typhoid fever with castor oil. He reports eight cases in which diarrhœa, delirium, and tympanites were prominent symptoms. All were treated by a dose of castor oil. The author says: "I think any physician will be pretty thoroughly convinced after trying it in one case. Take any case, the severest

you may see, and give him a dose of castor oil every morning and no other medicine whatever. The dose should be large enough to act in four to six hours and should range from two teaspoonfuls to two tablespoonfuls according to the condition of the bowels. Keep an accurate record of the temperature, and you will be convinced. At any time during the course of the fever withdraw the oil, and both you and your patient will be convinced. Float the oil in sweet milk in a hot cup and there will be no objection to the taste. It is not very objectionable, however, to typhoid patients, as their sense of taste is very dull."—*N. Y. Med. Journal.*

Hepatic Colic.—Dr. S. Artault de Vevet, in *Ther. Month.*, recommends oleic acid, the active principle of olive oil, in the treatment of biliary lithiasis. He has found that the remedy will relieve the attacks promptly, and he believes that the drug will prevent the further formation of stones and the consequent return of the attacks. He prescribes the acid in capsules in doses of eight minims each, one to be taken morning and evening for two weeks. Should the attacks recur, he advises a daily dose of eight to fifteen minims every morning for a few days before the expected attack, if they come on with any regularity. As to the rationale of the action of oleic acid, de Vevet states that, as is well known, the gall-stones, which are the usual cause of this condition, are made up for the most part of cholesterin and lime salts, and that the cholesterin is precipitated when the bile is deficient in sodium choleate. The salt of the biliary acids ordinarily keeps the cholesterin in solution and one of these, cholic acid, may be regarded as being made up of a radical and a fatty acid, which latter is closely allied to oleic acid. The difficulty, it seems, in carrying out this treatment would be in securing a pure produce of oleic acid.—*Jour. of the A. M. A.*

Hot Enemas.—The hot enema, 108 degrees to 112 degrees, is very useful in Bright's disease, and in heart trouble with dropsy. Its action is two-fold, it stimulates the kidneys and the heart and also removes toxins from the intestines. In the passage of gall-stones, the hot enema, one hundred and twelve degrees to one hundred and fifteen degrees, is relaxing and is one of the best measures that can be used to hasten the passage of the stones and relieve the accompanying pain. It should be repeated every three or four hours till the attack is relieved. Colic and pain in the pelvis, whether inflammatory or neuralgic, also yield to the hot enema. The analgesic effect of the heat, combined with its relaxing power, is what gives it efficiency in these conditions.—*Pacific Health Jour.*

BOOK NOTICES.

A Treatise on Diseases of the Skin.—For the use of Advanced Students and Practitioners. By Henry W. Stelwagon, M. D., Ph. D., Clinical Professor of Dermatology, Jefferson Medical College and Woman's Medical College, Philadelphia; Dermatologist to the Howard and Philadelphia Hospitals. Handsome octavo of 1125 pages, with 220 text-illustrations, and 26 full-page lithographic and half-tone plates. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $6.00 net; Sheep or Half Morocco, $7.00 net.

This book presents the practical part of the science of dermatology in a sufficiently full and complete manner to make the work one that will give the general practitioner a clear comprehension of the symptomatology, diagnosis, and treatment of the various affections with which he is most likely to come in contact. Diagnosis being the most difficult and confusing part of cutaneous medicine has been wisely accorded considerable attention. The elaborate remarks under General Diagnosis will be found of substantial aid in narrowing the diagnostic possibilities. Treatment has been detailed with unusual clearness and accurateness, the author, in addition to the remedies and methods used in his own practice, having referred frequently to those employed and advised by others.

The Vermont Medical Monthly

Vol. VIII. August 25, 1902. No. 8.

ORIGINAL ARTICLES

DISLOCATION OF HIP DURING NORMAL LABOR.*

By L. B. Newton, M. D., No. Bennington.

If you will bear with me, I will report a case of labor terminated by the use of the forceps and an anæsthetic. As we proceed we will ask ourselves, were an anæsthetic and the forceps necessary in this particular case?

Much has been said and written on the use of the forceps; some for, and some against, their use in normal labor.

But the majority (we may say all) of our best obstetricians are opposed to their use in this class of cases.

It is not in my province to give you a learned dissertation on obstetrics, the surgery of the hip-joint, fractures and dislocations, the pathology of diffuse cellulitis, nor the diseases resulting from all these.

It is my purpose to give you the facts, history and treatment of a case which came into my hands in a most unfavorable condition.

It may not be of interest to you, but it has been, I may say, of vital interest to me and those who were unfortunate enough to be associated with me.

How much interest my predecessors had in the case remains to be learned.

On January 14, 1901, I was requested to attend Mrs. F. R———, age 27, the mother of five healthy children. I had attended her in four previous confinements, all of which were natural, and subsequent recoveries were normal.

Before proceeding to make a physical examination of the patient I gleaned the following history:

On the eighth of October, 1900, labor commenced at 10 p. m. In the early morning a physician was called to attend her. Soon after his arrival "the pains" became less frequent and their force diminished. For "fear of exhaustion and to save time" (he said) he administered an anæsthetic and proceeded to deliver with instruments, by the aid of three neighboring women who were invited to assist, as is usual at such times. In process of time the child was born and placenta delivered. Before the woman recovered consciousness the doctor left for home. During his visit to the patient the next day, she said to him: "Doctor, there is something wrong with my left hip." Without an examination of the case, he replied: "You are all right, only your stomach is a little out of order, and you will be well in a short time," and left.

In a day or two, by reason of pain in the hip and limb, he was requested to call, which he did. Before he left her he learned she had had a chill, and notified her that she was having typhoid fever. In due course of time an abscess began to appear, one and one-half inches below Poupart's ligament, in close proximity to and to the left of the femoral vessels.

After about three weeks, this doctor was discharged and another called, who opened the abscess and allowed pus to discharge.

In a day or two, he directed his attention to the healing of the abscess by poultices, antiseptics, and giving her, by way of tonics and anodynes, syrup of hypophosphites, morphine, etc., he left her to recover, or die, as the nature of the case would determine. He presented his bill to the town and informed the overseer of the poor that his patient would get along without his services.

* Read at the 88th Annual Meeting of the Vermont State Medical Society.

In a few days from this time, on the fourteenth of January, I was called to take charge of the case, when the above history was given me by the mother, sister and patient.

Upon examination I found emaciation, debility, pulse fast and weak, temperature one hundred and one degrees, and anorexia; bowels constipated; sleep out of the question, except by morphine, Tully's powder, etc., which relieved some of her pain and discomfort. Food, such as gruel, broths and milk-punch, were given her through a drinking tube, as much as she would take, which was but little, not being able to raise her head from the pillow, or raise her hands to feed herself.

The hip and thigh were swollen and painful. Abscess discharging pus. The hip was so swollen and tender that an examination of it was impossible. By palptation, fluctuation was felt from the crest of the ilium to within four inches of the knee.

The thigh was flexed to a right angle with the body and the leg at a right angle with the thigh, the foot inverted. The knee of the left leg laid against the thigh of the right leg, the left knee four inches above the right, and the adductor muscles firmly contracted. From this condition of things my diagnosis was dislocation of the hip, although there was no possibility of finding the head of the femur, or the trochanter, by manipulation. Upon the back, the sacrum was covered by a bed sore three by four inches.

What was to be done in this state of affairs? Anxiety prevailed.

The family, friends and I did not wish to see her die without some effort being made to save her if possible. There was not an encouraging feature in the case, although she was previously healthy, had gone through former pregnancies and deliveries, and made good recoveries, raising as healthy children as the average of women.

As in all such cases, vigorous efforts must be employed immediately and persistently, yet everything seemed against us. But we made a start.

In the first place we made the sanitary conditions as favorable as possible in the way of cleanliness, antiseptics, disinfectants, tonics, stimulants, nutrients, and whatever else might be demanded.

In the course of time the general system began to respond. Abscess healed. Swelling about the hip and thigh greatly diminished. Appetite improved, bowels moved naturally and strength improved.

With the counsel previously, and at the time (March 17, 1901), the assistance of Doctors Skinner of Hoosick Falls, N.Y., A.S. M. Chisholm and E. B. Daley of Bennington, we reduced the dislocation of the head of the femur, brought the knee and foot into their natural position and the leg to its proper length.

In the manipulations of the leg in the adjustment of the joints the cicatrix of the old abscess was torn open, the fibres of the muscles and tendons were ruptured more or less.

She was put into bed, with a weight and pulley to the leg to retain the elongation if possible, and kept so for about four weeks.

In a short time after the adjustment of the leg, pus began to accumulate in the tissues of the thigh, which necessitated the introduction of a fenestrated, number twelve, rubber catheter as drainage tube, two-thirds of the length of the thigh.

Soon after the healing of the thigh, the knee-joint became swollen. It was opened and about two ounces of pus evacuated.

July 1, she was discharged with the left leg about one and one-half inches short. Motion of the joints fair. She is gaining in flesh and able to have the whole care of her family.

Now to the point. When was this dislocation produced? Both physicians who had the case before me say the woman was all right when they left her.

How was it produced? Did the head of the femur escape from the acetabulum and rupture the capsular ligament spontaneously and within twelve hours after delivery? Or, as Dr. Woodard used to say to us, back in the early sixties, was it a case of meddlesome midwifery?

Having been in active practice nearly forty years, I have never seen nor heard of a case like it. An extended search through obstetric literature reveals nothing of the kind.

My second purpose in this paper is to show the younger members of our profession that there is a heavy responsibility resting upon them. It matters not how well learned they may *think* they are.

In every case you may be called upon to treat, it is the duty you owe to yourself, your patient, the friends, and the profession, to bestow all the skill with which science has endowed you upon the welfare of the patient, let him or her be rich or poor.

The public demands at your hands thoughtfulness, precision, time, patience, skill, and, above all, honesty.

In the pursuance of the second part of this question, we think it would be well to investigate what we and others have to say in regard to the use of those powerful instruments —the forceps.

One good man has said: "Prolonged and very difficult labors *may* be perfectly normal, and it is in these cases that we are tempted to use the forceps, and in these, I think, we are most likely to make a mistake."

And while it might seem unnecessary to say that we should be slow to resort to them under such circumstances, yet I can easily believe, from my own experience at least, that there is often need of caution. I am aware of the fact that here, as well as elsewhere, there are two sides to the question. But granting the truth of the well-established principles of obstetrics, I believe that you will agree with me, that, unless our memory is occasionally refreshed on some points, we are likely to consent to the use of measures in actual practice not in accordance with the principles of science. Now to be more specific, I will say that, so far as I have observed, with reference to the sequelæ of prolonged and difficult labors, it is not best to use the forceps. I mean with few exceptions; and the exceptions would be these: —

WHEN FORCEPS MAY BE USED.

A tendency to exhaustion of the patient, or a sufficient prolongation to produce an inflammatory state of the parturient canal, and a consequent danger of infection. In these cases I would not, of course, advise long delay. Of course the propriety of instrumental delivery, or some help in cases of prolonged labor from uterine inertia, no one would question. But outside all these, there are a great many cases, especially among primiparæ, when the labor had, perhaps, better be prolonged for the safety of the woman.

In fact, without seeing it at the bedside, it would be hard to believe that some of these labors would terminate favorably (or at all) without instruments. But they do get through as a rule with patience and long suffering, and, what is quite important, they do not have any serious sequelæ. So while I do not go on record as opposed to the use of the forceps in proper cases, I have been very much impressed with the fact that a great percentage of labors (normal but prolonged ones) should not be hurried too much by the use of instruments. Now, the reason, as I see it, is this: there is evidently a cause for the delay, and in the class of cases I am talking about it is the rigidity of the soft parts, particularly the perineal muscles, and it seems to me that there is one thing indispensable, viz., time for relaxation to occur. And if this is not allowed, laceration in many cases would be inevitable.

Then, while surgery takes care of perineal lacerations with good results as a rule, perhaps, yet there are so many circumstances that, in one way or another, keep the surgeon from

seeing these cases afterwards, that it is a question with me, whether for this very reason the use of instruments should not be very much restricted in any normal birth. For an extensive laceration, when it has once occurred, may be hazardous in spit of all the attention, both of the surgeon and the accoucheur. I would not say that the long suffering should be allowed to go to the point of barbarity at all, but that so long as the contractions are good and accomplishing some headway, and no serious consequences of the delay are apparent, we should not yield to the clamor of the woman, nor of her friends, for instrumental delivery. And I further believe that if we do it is often the worse for the patient in the long run. In this connection we might also say that the duration of a normal labor may be anywhere from one to twenty-four hours, without any symptoms of urgency arising.

Then when we reflect that ninety-five per cent of all labors are normal, head presentations, the importance of avoiding unnecessary injury seems apparent.

I will say also that a personal observation, in the last year alone, of a half dozen primipara confinements, has demonstrated to me that, while there may be a delay, yet the great percentage will get along without instruments.

These cases that I refer to were normal labors, but they were all difficult, and there could be no question about the suffering on the part of the patients. But so far as I remember none of them extended over fifteen hours. All recovered perfectly, and the children were likewise healthy.

Furthermore, it would be useless to expect labor without suffering on the part of the patient with our present state of civilization. It might be true that with every law of hygiene complied with and bad hereditary tendencies eliminated we might have labor without much pain, as it is talked about by some enthusiasts. But inasmuch as such conditions can never be brought about we cannot expect our lying-in women to avoid suffering. I want to say, too, that I refer all along to normal labors—labors that do terminate, when left to themselves, in good shape. In other words, duration of labor alone is not sufficient to base the use of the forceps upon. And as to suffering, it alone is not sufficient, for in extreme cases, and, in fact, in any suitable case, chloroform can be used with decided advantage.

INJURIES DONE BY FORCEPS.

Now as to the injuries done by forceps I want to be fair and unequivocal. I am aware that it will make a great difference who has hold of them. But we must take the matter as we find it, viz., as it is done in everyday practice by all kinds of practitioners. I could not deny that they may, in good hands, be used to overcome the cause of delay with much dexterity, and I must also confess that they have been used with apparent impunity, for I myself have employed them without any bad results in *some* cases.

But I say, when a labor that would last say twelve hours without instruments is terminated in half the time by forceps, there must, at least, be more risk. This would seem to be self-evident.

Granting, then, that forceps delivery, as it is practiced in promiscuous practice, may be the cause of more serious and more frequent lacerations, and knowing that it is only a small percentage of these lacerations that get the attention of the surgeon when it is needed, I think I am justified in saying, "Go slow with the forceps in normal labors."

I make this assertion in view of the fact that the total amount of traumatism from instrumental cases is practically greater than it would be if the use of instruments were more restricted, because only a few men are in actual fact experts in handling them.

TO REPEAT AND CONCLUDE.

Diligent search of the literature of obstetrics and surgery results in the finding of nothing parallel to this case. We find cases reported where there have been dislocations of

the hip from disease of the joint from suppuration of the capsular ligament, ligamentum teres, and continued forcible contraction of the muscles holding the femur to the pelvis. From these causes we can imagine how it can be readily brought about. But in this particular case the woman had always been perfectly healthy. Never had any lameness from disease of any of the joints and never had any trouble in recovering from her four previous confinements.

DISCUSSION.

C. S. Scofield, M. D.

As Dr. Newton has stated, the subject, "Dislocation of Hip during Labor," is a very rare one indeed; in fact, the physicians to whom I wrote in Montreal, London, and several physicians in the United States, some of them with a large obstetric experience, and some in charge of large medical libraries, were unable to give me any information on the subject. Some of them stated they had never seen nor heard of such an accident. Hence I trust you will pardon my inability to give you anything new, as I can only treat the subject generally.

A large number of cases of congenital dislocation of the hip have been reported, and G. Ernst Herrman, of London, in his book on "Difficult Labor," describes a pelvis of so-called congenital dislocation of hip, and he states the dislocation is due to defect in the acetabulum, so that the head of the femur slips up onto the dorsum of the ilium. In these cases, the pelvic bones are very slender, due to a defect in growth, which is also the cause of the defect of the acetabulum. I mention this, for I have wondered if in Dr. Newton's case there was any lack of development or any evidence of rachitic trouble, or other disease causing lax condition of the muscles and ligaments of the joints.

Of all dislocations, that of the hip is the most rare. According to Kronlin, two per cent is the proportion, and of all varieties of dislocation of the hip, the backward dislocation is the most common. According to Kneer, of two hundred and ten dislocations of this joint, one hundred and sixty, or seventy-six per cent, were backward, while dislocations directly up or down he found to be extremely rare.

The most common injuries in connection with the backward dislocation of the femur are laceration of the cotyloid ligament, stretching and contusion of the sciatic nerve, rupture of the glutal vessels, and fracture of the acetabulum.

Luxation of the hip joint is next in frequency to that of the elbow, and like other forms of luxation, occurs more often after debilitating disease, like typhoid fever, rheumatism, etc. I remember seeing one old man who could produce luxation of many of his joints at will, shoulder, hip, lower jaw, etc.

The causes of dislocation, according to Sir Astley Cooper, are a fall while carrying a heavy load on the shoulders, falling of a mass of earth on the back while in a stooping posture, extreme force applied when the limb is in a fixed position.

In regard to treatment, etc., the late Henry Jacob Bigelow, professor of surgery at Harvard, and one of the finest operators it has ever been my privilege to witness operate, has written a monograph on this subject which has become classical. It was he who first described the "Y" ligament of the hip; he discovered this ligament to be the cause of the great trouble experienced in reduction of dislocations of the hip, necessitating the use of strong pulleys and an immense amount of force to break through it, in order to get the head of the femur back into the acetabulum. I remember well, while in Harvard, seeing Dr. Bigelow reduce a dislocated hip of two or three weeks' standing. The patient was brought to the Massachusetts General Hospital with a history of "injured by a falling sand-bank." Several doctors had tried reduction without avail. Dr. Bigelow was sent for and the students notified. We all made a

rush for the amphitheatre and found the patient lying on the floor in the middle of the room. In a few minutes Dr. Bigelow walked in (straight as an Indian though well advanced in years) and up to the side of the patient and said he had not seen the patient before, but understood the case to be one of dislocation of the hip. He stated: "I may not be able to reduce it, but if I was to attempt it, I should grasp the leg so (stooping down and taking hold of the leg) and I would flex the joint so (leg flexed well onto the abdomen), I would rotate it so (describing a circle with the knee outward), and extend the leg so," and snap! the head of the femur went back into the acetabulum with a report like that of a small pistol. It is needless to state that the cheers from the students and doctors present made the old amphitheatre ring.

AS TO THE USE OF FORCEPS IN NORMAL LABOR.

I will first say a word about forceps. The word "forceps" according to Davis, is derived from the Latin "formus," warm, and "capere," to seize; and defined as an instrument of two blades with a cephalic curve adapted to the contour of the fœtal head, and an external portion or handle, joined together near the center by a lock and designed for the extraction of a living child. Previous to forceps, hooks were used for the extraction of a child when the hand failed. Hippocrates, Soranus, and Celsus possessed such instruments and at Pompeii such hooks were found among exhumed instruments. In the eleventh century, Avicenne, a celebrated Arabian obstetrician, employed hooks when the hand failed, and expressed the possibility of extracting a living child with them, but hooks were principally used in the interest of the mother only.

In the year 1554, Jacques Ruff, of Zurich, is said to have invented the first pair of forceps intended for the delivering of a living child, which possessed in an undeveloped form, the essential characteristics of the modern instrument. In the seventeenth century, Pierre Chamberlen, physician-in-ordinary to the royal personages of England, invented the Chamberlen forceps, the manufacture of which was kept a secret for many years. Hugh Chamberlen sold this secret to Roonhuysen, of Amsterdam, in 1693, for a large sum. Roonhuysen carried on a monopoly of the forceps in Amsterdam for sixty years. In 1747 he obtained a municipal decree obliging every practicing obstetrician in Amsterdam to purchase the secret, and with his associates formed an autocratic medical association. This monopoly justly came to grief in 1752. A student of his, Van der Swam, who saw him at one time put his instruments into a bag and conceal them, later opened the bag and took the design of the forceps, which he communicated to a friend of Rathlaw, an obstetrician of Amsterdam, and the latter caused the permanent defeat of the monopoly. All doubt as to the exact form of the Chamberlen forceps was cleared away in 1818 (Davis) (1815 Lusk) by the finding of hooks and forceps in a house occupied by them in Essex. In 1747, Levret, of Paris, gave the forceps a pelvic curve in addition to the cephalic curve of former forceps which is generally retained by the French to the present day. Later came the long forceps and axis-traction forceps; the long forceps of Smellie and Levret are the ones from which nearly all the forceps of the present day are modeled. Smellie states he found pelves in which the sacrum jutted in so far that he could not push the handles of the short forceps back far enough to enable him to include the head (which lay above the pubes) between the blades. Thus at an early date the necessity for long forceps was felt and led him to contrive a pair. About this time, Levret contrived a pair which were much longer and stronger than Smellie's, the form of which has been substantially retained in the more modern French instruments. Axis-traction was perhaps foreshadowed by Stein, of Cassel, of 1767; he prolonged the fenestræ of

his long forceps towards the lock that he might pass through this space a band of pliable material, and thus make a more advantageous traction. Hubert, in 1860, invented a forceps in which the axial force was applied by a bar extending in the arc of a circle perpendicularly downward from the handle near the lock. In 1868, Morales devised a forceps with a perineal curve in addition to the usual cephalic and pelvic curves. Tarnier,in 1877, presented to the Academy of Medicine in Paris the forceps which bear his name, and which are much used at the present time for axis-traction. In America, the forceps first used were those brought from England and France; according to Engleman, the aborigines possessed no instruments for accelerating delivery. Their efforts were confined to changes in position and external pressure; even standing on the woman in labor is said to have been practiced.

The instruments in most common use in America are the short forceps of Simpson and Sawyer or their modifications (Lusk has used and recommended the original instrument of Simpson), the long and axis-traction forceps of Smellie and Levret or their modifications, Reynold's axis-traction, and Lusk's modification of Tarnier's. Neagele's forceps and Breu's axis-traction forceps are mostly used in Germany, while in France, Levret's and Tarnier's modifications take the lead. In England, Simpson's short, long and axis-traction, and Milne Murray's axis-traction forceps are in general use.

When in London two years ago, I had the pleasure of using Dr. Matthew's modification of Milne Murray's axis-traction forceps, which was the first pair of the kind and just out at that time, and though somewhat complicated, I found them to be a very good instrument indeed.

INDICATIONS FOR THE USE OF FORCEPS.

Herman states they are never required before the os will admit four fingers. Among the indications for their use may be mentioned uterine inertia, weak abdominal muscles and expelling pains, increased size of the caput with no advance; when the ordinary operative forces during labor are insufficient to overcome the obstacles to delivery, and in cases where speedy delivery is demanded in the interest of either mother or child. Most commonly used in primary inertia with os fully dilated and head presenting, although Tarnier applied his axis-traction forceps in breach presentations when feet could not be reached. Some claim forceps are of use in getting the head over the perineum without laceration.

Position of the patient is on the back in America, Germany and France; on the side in England.

Precautions to be observed, are, cleanliness; thoroughly disinfect the instruments, hands, vagina and external parts. Be sure to have the rectum and bladder empty, the membranes ruptured, and os dilated to admit at least four fingers. Be careful not to apply over cervix, and make sure of the position of the head. As a rule, never apply so long as nature is able to do the work well. I have found that as a rule when the scalp of the fœtus begins to wrinkle, forceps will not be needed. I have never seen the latter mentioned in any text-book, but my observations have proved it true in nearly every case, and hence, I always feel relieved in a case where I fear difficult labor and that the forceps will be necessary, to find the scalp wrinkling. Application of the forceps simply to save time and promote the convenience of the obstetrician, should be condemned. Until the first stage is practically completed, I never encourage delivery either by pressure or bearing down by the patient, but keep her as quiet as possible, and at times give bromides, etc., to promote rest and sleep; the latter is of especial benefit in cases where the first stage is unusually prolonged. I rarely give medicine to encourage pains; I often think when sitting at the bedside of a woman in labor what a solemn and sacred thing it is, and what a responsibility rests upon my shoulders.

It is a terrible ordeal for a woman to pass through. I sincerely believe that meddlesome midwifery has caused more trouble than being left entirely to nature. It is said that some Indian women go into the deep forest alone by themselves at this time; this, to my mind, is better than the help of a reckless doctor.

My motto, in the practice of my profession, is, if I cannot do good I will be sure to do no harm. Take time and treat every case as though your own wife was the patient.

POSTERIOR PUDENDAL HERNIA — WITH A REPORT OF TWO CASES COMPLICATING PREGNANCY.*

By C. W. Milliken, M. D., Post Mills.

My excuse for presenting a paper on this rare form of hernia, is the hope that it may be of service to some of you, sometime, and that you may be relieved of the uncertainty under which I labored, and that it may save you from the error of opening such hernia, thinking it an abscess, as was done in two cases which I shall quote.

A better title would have been perineal hernia, as this is a perineal hernia, passing forward into labia, and I shall not confine myself to the labial form.

Up to the present time there has been no thorough post mortem examination, and until a dissection has been made there must remain much uncertainty and theory as regards its exact anatomy.

Perineal hernias, of which Scarpa & Cooper published the first authentic cases, are more frequent in men than in women.

They ought not to be confounded with the inguinal hernias, which accompanying the testicles in perineal ectopy, reach the perineal region following the genito-crural fold; or with femoral hernia, which may reach the labium or perineum.

The cul de sac of Douglas, recto-vesical in man, recto-uterine in woman, gives them origin.

Zuekerkandl has pointed out on the peritoneum which covers the posterior face of the uterine neck, principally on the sides of the median line, a reticulated condition which would indicate the weak points where the serous membrane is predisposed to give origin to the displacement in question, in women.

These hernias, according to Ebner, are of congenital origin; they depend upon the particular depth which the peritoneal cul de sac in question presents in the embryo, a disposition which has been studied with rigorous precision by Kolliker, by Breisky and by Zuekerkandl; they seem to be due to the abnormal persistence of this cul de sac to reach to the floor of the pelvis.

The cul de sac of Douglas descends much deeper in the embryo and the new born than in the adult, and may contain intestinal loops.

This persistence has been noted by Ziegenspeck, where the peritoneal cul de sac descended about to the middle of the posterior vaginal wall.

This would explain the production of vaginal hernias, which may be considered, in certain cases, as true congenital hernias.

The cul de sac of Douglas, on the other hand, abnormally developed is the most direct route by which the inter-abnormal pressure may push back the peritoneum through the interstices of the levator ani, and transform a vaginal hernia into a perineal or posterior pudendal hernia.

The engagement of the viscus in the herniary passage would be in the median line at its commencement; in descending it would dissect it way through the cellular tissue between the vagina and rectum, until meeting with the resistance of the perineal body, it deviates to the right or left, or if from injury or congenital weakness there is less resistance in the posterior vaginal wall, it passes anteriorly into the vagina, becoming an enterocele.

* Read at the 88th Annual Meeting of the Vermont State Medical Society.

It is also possible for it to pass posteriorly and become a rectal hernia.

According to Winckler, the perineal hernias show three varieties, corresponding to different passages:

"The first, anterior, is made beween the bulbo cavernosus and the erector clitoridis muscles, and which he calls posterior hernia of the great labium.

"Second, median, passes between the bulbo cavernosus and the deep transversus perinei.

"Third, posterior, is made between the levator of the anus and great anal."

(I find in the older dictionaries that the transverse perinei is called the levator ani parvus, while the levator ani is called levator magnus.)

If perineal hernia generally depends on a congenital origin, constipation none the less seems to play a certain part in their appearance. In the observation of Scarpa, and in that of Pipelet, the hernia appeared following an effort made with the legs drawn apart.

In my own cases, the hernias appeared in the fourth and sixth month of pregnancy, and this condition was undoubtedly the exciting cause.

Hernia from the bladder to the perineum, has been observed; Pipelet and Astley Cooper each reported a case in man, and Verdier two cases in women.

Ebner, who published in 1887 all the cases reported to the time of his article, found only six cases of posterior pudendal hernia.

Astley Cooper says: "This hernia is easily distinguished from the ordinary inguinal hernia, which also descends into the great labium; it does not have any connection with the inguinal ring and does not cause any tumifaction of the superior part of the labium. The tumor occupies almost the centre of this and extends to the internal side of the ischium in the cavity of the pelvis.

"One feels it like a ball in the thickness of the great lip, and if one introduces the finger into the vagina, he recognizes that it extends into the pelvic cavity, between the ischium and vagina towards the uterus, or one ceases to perceive it."

Ebner says: "When the hernia makes its path a little further back, it reaches the great labium on the sides of the fourchette; it is prominent then at the same time towards the perineum, the vulva and before the rectum." The first of these forms corresponds with the anterior perineal variety described by Winckler; the second, to his median perineal hernia. In a case which he observed, "one felt in the depths, a narrow orifice situated between the internal face of the ischium and the constrictor of the vagina.

"The finger introduced into the rectum and supported on this orifice, hindered the hernia from going out, when it was reduced; when the pressure was relieved it came out with a gurgling sound."

Scarpa cites a certain number of cases where this hernia manifestly comprehended the bladder, and in the case of Hartman, the vaginolabial hernia contained a calculus.

This sort of cystocele should no more be confounded with the vaginal cystoceles than with inguinal hernias.

While the age of some objects seems to indicate a congenital origin, Masse showed a case in which a sub-serous lipoma of the cul de sac of Douglas entering the peritoneum determined the hernia.

The diagnosis is generally easy; the absence of inguinal or femoral hernia; the fact that pressure on the superior part of the great labium does not prevent its appearance, while pressure behind does; the discovery of the orifice through which it appears, and the pedicle being traced in the vagina. It must be differentiated from solid tumors, pedineal abscesses and cyst or abscesses of the glands of Bartholini.

In the prone position with hips elevated it disappears.

On straining or coughing it reappears, often with a gurgling sound as in other herniæ.

Obturator hernias prominent towards the great labium, should not be mistaken for this

form, for palpation shows that its pedicle descends into a separation of the horizontal and descending branches of the pubis.

These hernias can but partially be confined by a T bandage, or a very voluminous pessary, or by a waxed sponge, as used by Astley Cooper. Probably no pessary which it would be safe or comfortable to wear, would retain the hernia during exertion or even prolonged standing.

Operative measures are most certainly indicated where it causes much discomfort or shows a tendency to become incarcerated.

A. Palmer Dudley has seen but one case, for which he recommended the following operation: An incision extending from cul de sac of Douglas to fourchette; the hernial sac being removed, several rows of buried sutures to be then inserted forming a large median raphe between vagina and rectum.

I do not know that this operation has ever been performed.

In case of the persistence of the embryonic condition of the cul de sac of Douglas, it would be good surgery to resect the cul de sac, as Eberhart in 1894 reported he had done, shortening it to its normal depth.

In his elaborate article on perineal hernia, published in 1887 Ebner concludes:

First. Perineal hernia is of congenital origin.

Second. A trauma cannot cause a perineal hernia.

Third. The cavity between the bladder and rectum, in female between the uterus and rectum, is deeper and more extended in the embryo than in later years.

If this cavity persists, we have the condition for perineal hernia.

Fourth. In the embryos of same age this cavity is not always equal nor constant.

Fifth. The descending of the contents of the hernia occurs in the upper part towards the median line, a yielding to right or left takes place in a deeper part.

Sixth. Perineal hernia chiefly takes its way through two certain clefts which are between the ischio-coccygeus and levator ani muscles or between the ischio-coccygeus and coccygeus of Henle.

Seventh. The cleft may often be seen in men.

Eighth. All hernias that appear at the lower pelvic aperture, represent only a variety of this hernia.

Ninth. A division of the perineal hernias with reference to the transverse muscle is impossible.

Tenth. The perineal hernias of the dog are dislocations of the anus without hernial sac, by the wide clefts in the levator ani.

Eleventh. The same sort of hernia appears in man as well as in dogs and may be acquired by habitual obstruction of the stools.

Hartman, according to Scarpa, first described posterior labial hernia in 1686. Observed in 1671.

Found tumor in body of a woman who had passed stones for some years before death; thought at first that bladder was wanting, but saw it was part under the pubis, partly out of the pelvis; this last contained a stone weighing two ounces; tumor was on left labium.

1713 Mery—Found a bladder hernia in the perineum of a woman pregnant five to six months; this tumor, the size of a hen's egg, was situated between the anus and the lower part of external orifice of vagina.

When bladder was empty the hernia disappeared.

1740 Chardenon—Found at autopsy of man of forty-five who seemed to have died of acute disease. No trace of muscles which are usually in the perineum with exception of the transverse perinei, which was spread out with its fibres over the tumor.

It was not certain that the man died from the hernia.

1743 Verdier—Woman of twenty-three, pregnant, six months, consulted for urinary difficulties; had a painless tumor at side of perineum, disappeared on pressure; disappeared on parturition but came again on second pregnancy. Treated by T bandage.

Occupied perineum second time.

1746 Smellie—Two cases of perineal hernia, left side of anus.

1750 Papen—Reported a hernia pudenda in a robust, unmarried woman of fifty who died suddenly; it had the shape of a thick bottle, which came from the right side of anus and hung down to calf of leg; in it was found a

great part of small intestine, a part of right colon with sigmoid flexure.

1760 Pipelet—Found in perineum a soft, longish tumor of thickness of an egg, which on pressure, drew into pelvis along right urethra. Felt in raphe of perineum, an orifice which would let through a small nut.

1772 Bose—Resected a strangulated hernia in body of woman of sixty who had been strangled. Contained small intestine. Went out of right side of anus through abnormal opening in bottom of pelvis.

1775 Scheider—Congenital perineal hernia, six inches in circumference, in new born child.

1780 Juville—Observed a perineal hernia very close to labia, associated with an inguinal and an umbilical hernia.

1802 A.Cooper—Saw woman of twenty-two who suffered from symptoms of incarcerated hernia; had tried reduction vainly some hours before; tumor size of dove's egg, was in left labium, had often come down during last six months, and easily brought back; had been out now three weeks, caused severe pain on coughing. Reduced in three minutes and was well for a long time.

Observed, also, the following case: Young married woman of twenty-two came to me for tumor in right labium, not so large as dove's egg; came out on upright position, returned when lying down; advised to wear waxed sponge in vagina and have not heard from her since.

1810 Shreger—Saw vaginal hernia complicated with perineal hernia, in woman who had already borne once.

1821 Cloquet——Unmarried woman of twenty-four of dry and nervous constitution, consulted me on February of this year. Found tumor of post part of right labium, somewhat painful; replaced and proposed pessary to which she did not consent; hernia has not reappeared.

1828 Hager—Woman of twenty had tumor of posterior and left perineum since three weeks, hung down four inches.

Originated from attempt to lift to back heavy bundle of wood; discharged after four weeks with purse-like bandage, as incurable.

1831 Hagar—Probably same case as above, second pregnancy; tumor size of goose egg, at lower edge of great labium and near anus; diminished after parturition.

1832 Rognetta—Reports a perineal hernia formed from the bladder on both sides; this was in the labium near the vagina, not in it. Troubled with micturition four years; tumor at entrance of vagina at lower part of both labia.

1837 Boyer—Woman of twenty-two, tumor size of dove's egg on labium magus in lowest part.

Went back easily; T bandage prescribed.

1844 Stoltz—Saw married woman who was pregnant for the third time, noticed tumor on right side of vulva in sixth month of pregnancy; worse on coughing; had pressed through levator ani.

1866 M. K. Harrison—Medical and Surgical Monthly, Memphis; large, portly man, weighing two hundred and fifty pounds seen May twenty-seventh, said he had suffered three months with burning pain in perineum and almost constant micturition which he attributed to excessive horseback riding; these symptoms had suddenly disappeared and he wished me to examine a small tumor there, found tumor, size of hazel nut just behind scrotum in contact with urethra at bulb; prescribed lead lotion as local application; increased till it encroached on scroutm on right side; scrotum lanced June four when much very offensive feculent matter was discharged; on seventh discharged piece of intestine six inches long; wound healed and patient recovered in thirty-five days.

1881 Winckel—Multipara, last very difficult; just before had observed tumor on right great labium which grew slowly; close to original tumor a second slowly grew; was near tuber ischii in the ascending branch, size of man's fist, in two parts; treated at first with T bandage, later with that of Scarpa.

1881 Konig—The rarest hernial tumors are those which appear in front of the transversus perinei near the vagina and thus reach the surface in the region of the labia; I saw one of these of the size of a large head of a man.

So far we have followed Ebner who brought work down to 1887.

1884 Tilanus—Unmarried woman, forty-four years; from 1879 observed small tumor to right of anus; stools and urine undisturbed; gradually increased, hung down to fossa poplitea dextra, grew from most posterior part of right labium magus, extirpated in January, almost healed in three months, maintained in 1886; the tumor extirpated was a lipoma and the perineal hernia was found during operation.

1892 Koster—Ileus and perforative peritonitis caused by gangrenous incarcerated perineal hernia. Unmarried woman of fifty-three en-

tered September 16, 1892, died September 19, 1892; after exertion felt pain in lower part of body last May, became very bad September 14 with uterine hemorrhage; died of peritonitis; at autopsy found sac between vagina and rectum reaching to introitus vaginæ; in the hernial sac were found flecks as if from old hemorrhages.

Undaled—Petrunti. Saw a marrie dwoman with symptoms of vomiting, obstruction, etc., found tumor between colon and vagina; thought it an abscess, made incision in vagina through which sanies, etc., came; the wound healed, symptoms returned, made second incision at a time when there was inversion of uterus which returned to its place after second incision.

Guersant—Chassaignac. Little girl had tumor of labium majus for a long time; diagnosis was cyst with abscess formation; after incision it was seen that sac contained the ovary with part of Fallopian tube; contents excised; patient died of peritonitis; hernia labialis ovarii.

Veit—Ziemssen's Handb. Observed hernia labialis posterior on right; of long standing.

Robertson—Woman of twenty-three; during second pregnancy felt tumor suddenly in right labium majus; changeable in size; common pessaries did not keep it back; parturition normal and the hernia did not come down after; best kept in place by sponge.

My own cases are as follows:

Case One. A. R., aged twenty-seven, frail, sickly woman who had been under a physician's care most of the time for ten years. Consulted me in February, 1899. Was then in sixth month of third pregnancy. Last delivered March 3, 1897.

A short time before had, after considerable pain in the region, discovered a swelling about the size of hen's egg, in right labium majus.

Not constant, worse on hard work and prolonged standing.

No history of sudden appearance due to strain.

After a very careful examination I made a diagnosis of hernia but did not know what to call it, as I had never read of the condition.

Text-books at my command mentioned that there had been cases reported of posterior pudendal or labial hernia, and thus dismissed it.

I am rather in doubt as to which side of the bulbo-cavernosus muscle it passed out, but think internally.

If so its relations would be, anteriorly, deep transversus perinei; posteriorly, superficial transversus perinei; externally, bulbo-cavernosus; internally, sphincter vaginæ.

A study of "Gray" seems to indicate that this may be a weak spot.

Should it pass between the bulbo cavernosus and erector clitoridis it would have to pass through or push ahead of it the superficial transversus perinei.

It then passed forward into the labium majus.

In prone position it disappeared, and a finger pressed on spot indicated, retained it perfectly. It could be felt on posterior vaginal wall.

As it did not cause great discomfort, except on severe exertion, patient was dismissed with direction to avoid hard labor as much as possible, and to lie down frequently during the day. Also I instructed her to lie down with hips elevated, on first signs of labor, and send for me at once. I was fearful that a loop of intestine might be caught and damaged during labor, if she remained upon her feet as most women do. She passed the remaining months of pregnancy with little inconvenience.

Patient followed directions and when I arrived there was no sign of hernia and a normal labor followed.

I hoped there would be enough pressure on sac to cause adhesion of surface and obliterate the canal, and she remained in bed for over three weeks, but the hernia still troubles, to a minor degree, and she has to avoid heavy labor. Is using a T bandage with some success.

Case Two. Mrs. M. M., age thirty-five, large, strong, farmer's wife. Second pregnancy; first ten years before. Consulted me in April, 1900.

Found large irregular tumor of right labium, size of a man's fist. Very painful when at her household duties.

Disappeared in prone position.

Anatomically same as previous case, I think, and pressure at about same spot retained as in case one.

At about the middle of fourth month of pregnancy, lifted a heavy kettle from stove, when something seemed to give way. Had had "bearing down pains" from about last of second month of pregnancy.

Also "severe pain in lower part of abdomen on right side."

A T bandage with wooden pad gave support, and she passed remaining months in comparative comfort, avoiding hard work.

Same methods were followed at delivery as in case one with no complications.

Hernia has appeared a few times since, sometimes for a day, at other times only for a few hours, accompanied with a burning pain.

It has not appeared for past three months, in spite of the fact that she does all her own household work on a large farm, and cares for a twenty-three pound baby.

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DISCUSSION.

Dr. Wheeler.

Mr. President:—This subject that Dr. Milliken has presented so ably is a very rare one, and I am sure I for one do not feel competent to discuss the paper without giving it some special preparation, but I want to express my appreciation of the paper and the great amount of work that Dr. Milliken has put into it, and say that such an able and comprehensive going over of the entire subject is a good contribution to literature.

It seems strange, in view of all the reported cases that the doctor succeeded in collecting, that the text-books should have so little to say upon the subject. There are a few that I am familiar with that have a little to say—perhaps a statement here and there, as to the number of reported cases. It does not seem, with all these cases, the condition would be as rare as we think it is, and perhaps it may escape notice sometimes when it is really present.

I think that the doctor is to be congratulated on the paper he has prepared, and the society in having something of that sort added to it.

SANATORIA FOR PERSONS AFFLICTED WITH TUBERCULOSIS.*

By W. N. Platt, Shoreham.

From time immemorial, the human race has held the delusion that the great white plague was both an unpreventable and incurable disease, that scientific endeavor was powerless to cope with the awful loss of life resulting from its ravages. But the scientific investigators of the last ten years have demonstrated that it is not only preventable, but curable.

With these facts firmly implanted in the scientific mind, of course only a short time will elapse before the death rate of this, the most malignant of all diseases, will lose its present magnitude.

The intelligent prophylaxis against any disease demands an understanding of the methods by which it is spread. The medical world assigns the chief role in the propagation of tuberculosis to the inhalation of particles of the sputum of phthisical persons, either dried and pulverized or the moist floating particles thrown out in coughing or sneezing.

Next comes the communicability of bovine tuberculosis to the human being, and the probability of the transmission of avian and other varieties of tubercle bacilli through the alimentary canal to man.

Koch's experiments convinced the medical and veterinary profession that human and bovine tuberculosis were identical and that this

* Read at the Fourth Annual Session of the Vermont School of Instruction for Health Officers, and published also in Bulletin 1, Vol. III, of the Vermont State Board of Health Reports.

was quite a common method of the transmission of the disease; but in his paper before the British Tuberculosis Congress in 1901 he retracted the statement and asserted that the diseases differ to that extent that the human bacilli cannot be transmitted to cattle, though he states that it is not as yet absolutely decided whether man is insceptible to bovine tuberculosis. This change of base on the part of the master for a time made the profession feel that they had lost what was considered a modern pathological axiom.

Dr. Koch is a courageous man who undertakes, with good intention, to solve great problems and when convinced of error he is a reactionist, being one of those reformers who does not falter through timidity, who is brave enough to recognize a blunder. Dr. Holmes said, "The sight of a thawing conservative is always more pleasing than that of a freezing liberal."

Villemin and Chauveau have demonstrated the fallacy of his later teachings, and from inoculation with the humanized bacilli in cattle have produced the giant cell of bovine tuberculosis, though as a rule the cattle showed a high degree of resistance.

Ravenel, in his masterly article before the recent meeting of the American Medical Association, substantiated the claim of these men. So we believe that if the sputum of the phthisical person is destroyed and if the flesh and dairy products of tuberculous animals are not taken into the system the common methods of contracting the disease will cease to exist.

Dr. Biggs of New York, by a system of education has, during the last fifteen years, reduced the death rate in that city more than fifteen per cent.

By legislation, tuberculosis became a *reportable* disease, very near akin to the exanthemata. A case being reported to the board of health, this board directed the patient how to destroy the sputum and what means should be taken to prevent his becoming a menace. Dr. Biggs put into the hands of the family and those about the patient the literature concerning prevention and disinfected the premises by absolute cleanliness; it is his belief that the best disinfectants are soda water, fresh paper and paint.

A city ordinance was passed making it a misdemeanor to expectorate in public vehicles, on sidewalks, in halls, etc.

It seemed such a hardship to have these cases reported that much less was accomplished than should have been. But Dr. Biggs claims that only one-third of the cases were reported. Friends were unwilling that the patients should be shunned on account of their condition, and in a myriad of cases, where the disease was in an incipient form, their condition was not diagnosed. No one seems willing that their friends and relatives should be openly declared a menace to the race.

Eventually this disease may be eradicated by educational endeavor. I leave you to judge how much more satisfactory would be a little spirited legislation act.

A nidus of bacilli is formed, only a few lesions have yet occurred; can the person be cured? How?

A large per cent of incipient cases of tuberculosis are cured in every sanatorium by judicious hygienic sorroundings. These persons could have been just as well cured in properly situated homes.

In more than sixty sanatoria situated in Germany, statistics show that between 1897 and 1900 sixty-eight per cent were cured. The time is so short that positive conclusions as to the duration of cure cannot yet be drawn.

The results at the well-known state sanatorium at Rutland, Mass., furnish almost identically the same statistics, as also do those at Sharon, Mass., and Liberty, New York.

The results at Saranac Lake under the great Trudeau are not quite as good, for the reason that many are admitted who have passed beyond the incipient stage.

The treatment at all these sanatoria that I know any thing about is the same; namely,

living in the open air day and night, with nutritious food, largely nitrogenous; during the febrile stage rest is added.

While on my holiday, in May of the present year, I took the opportunity of visiting the state sanatorium at Rutland, Mass. The work was bewildering in its results. The buildings were crude and far from ornate, excepting the administration building; they were one story high covered with a cement that already showed the effect of the frost and will soon have to be repaired. The laboratory was situated in a basement and was devoid of necessary appliances.

Artificial ventilation was being added. Most of the patients occupy dormitories, and I should judge that about one thousand eight hundred cubic feet of air was allotted to each individual.

Rutland is located only fifty miles from Boston at an elevation of one thousand one hundred feet above sea level. The soil is sandy and opens out into an oval basin. Very near to this is a projection from the hillsides with pines above, pines below and pines on each side of it.

The sanatorium faces south, while the hills and pines behind shelter it from the northerly winds. The buildings are steam-heated indirect. I understood from Dr. Marclay, the superintendent, that the plant was very satisfactory.

Foot-paths lead in every direction through the pine woods, with numerous benches on which patients may rest when tired. They have many small pavilions in the woods for rest.

The examinations for admission to the sanatorium are made at the State House, Boston, and two-thirds of the patients come from the vicinity of that city. The examinations are made by the visiting physicians, Drs. Bowditch and Clapp, and they intend to admit only those who are still in the incipient stage, and only admit about one-fourth of the applicants.

They make careful physical diagnoses, are painstaking with the previous clinical history, use the microscope largely and if in doubt resort to tuberculin. They lay no great stress on heredity.

On admission practically all of the patients have temperature above normal. Those over one hundred degrees are put to bed at once. No stress is placed on the value of alcohol, cod liver oil, or other remedies, and they are seldom given. Labor of any sort is not expected, violent exercise is forbidden. The average stay of patients is eight months. The nurses are all graduated patients.

On leaving the sanatorium the patients are advised to live an outdoor existence.

Three nutritious, well-cooked meals are served, and three lunches, in which milk predominates, are served each day.

At nine o'clock in cold weather the steam is turned on to the dormitories, the patients disrobe and go to bed. When needed, fur robes are furnished, and it is the intention of the authorities to have covering enough to keep patients warm. Windows are then fully opened and kept open until the rising hour, then closed and steam again turned on.

On admission tubercle bacilli are found in about four-fifths of the cases.

The prognosis is largely founded on the gain in weight. In this sanatorium the average gain between admission and discharge is fourteen pounds and the statistics so far, applying the two-year limit, show sixty per cent of recoveries.

The experience at Rutland shows that cure does not depend on high altitude, any special system of medication, costly buildings, any complex thoracic gymnastics, and the statistics in bleak New England compare favorably with the sanatoria of the Rocky mountains or Alps.

In the great fight against this communicable, preventable and curable disease we must disseminate the knowledge of the means to be taken for its

prevention, teach the methods of exact diagnosis, provide sanatoria for the consumptive and scrofulous poor by legislation, and make it a reportable disease.

We must impress the community at large that by proper legislation they can save many lives and much suffering.

CORRESPONDENCE.

The Use of X Rays in the Diagnosis of Gall Stones.

Editor Vermont Medical Monthly:

Dear Sir:—In a paper printed in No. 6, Vo. VIII, of your journal, written by Dr. S. H. Weeks, entitled "Gallstones as a Surgical Affection," I find on page 160 the statement that "the X-Ray is of no value whatever in cases of gallstones as a means of diagnosis." If the author is referring to the fluoroscopic examination for gallstones, his statement is quite correct. But not so, if he means that under *no* condition and by *no* means, it would be possible to correctly diagnose gallstones with the aid of X-Rays.

Dr. Carl Beck of New York, Dr. Rudis-Jicinski of Cedar Rapids, Ia., Dr. Albers-Schoenberg of Hamburg, Dr. Buxbaum in *Munchner Med. Wochenschrift,* 1897, p. 1368, have, besides others, repeatedly been able to successfully radiograph gallstones in view. It is extremely difficult to do so, and I know of no object that requires so much skill as just the bringing out of shadows of gallstones on the photographic plate.

In one case reported by Dr. Rudis-Jicinski in the *American X-Ray Journal,* No. 2, February, 1901, after five unsuccessful trials, the sixth exposure brought out a good negative confirming the diagnosis.

Self-evident I have only reference to those reported cases where the Rotengen diagnosis was subsequently corroborated by a cholecystotomy.

The causes for the failures to get positive results are many. The apparatus to generate the rays must be sufficiently powerful; the tube must have the correct degree of vacuum—contrast with just enough penetration to insure success—; the position of the body in relation to tube and plate is of the greatest importance, and last but by no means least, the skill in developing the plate decides over success and failure.

It is well known that gallstones consisting of pure cholesterin can hardly be radiographed; the rays even of a soft tube pop through without causing a shadow. Those stones which contain a large percentage of the salts of taurocholic and glycocholic acids, and those impregnated with calcium, will give, *ceteris paribus*—fair or good results. Excess of adipose tissue or old people suffering from arterio-sclerosis, will usually give negative results.

The two cases I have had so far a chance to examine, were failures.

The first case was that of a woman weighing 280 pounds, and the other a man of 67 years of age—an alcoholic.

I think the above remarks will prove the statement of Dr. Weeks incorrect in part, at least, and I am sure that in the near future, with increased perfection in technique and the construction of improved tubes, not so many failures in the radiography of gallstones will be reported.

Fraternally yours,

W. Sprenger, M. D.,

U. V. M. '91.

Summer Diarrhea in Children.—In the treatment of summer diarrhea of infants and young children, the first step should be the immediate and complete clearing out of the intestinal canal. The early use of calomel or castor oil is often all that is necessary to cut short an attack. If mothers in the city could be taught this simple rule on the first appearance of diarrhea, there would be many less young lives sacrificed each year to this bug bear of "the second summer."

SPECIAL THERAPEUTIC ARTICLES

NERVOUSNESS OF THE MENSTRUAL PERIOD, ETC.

Dr. S. E. Fowler, Kansas City, Mo.

In my opinion one of the most difficult affections with which the general practitioner has to contend, is nervousness in its various forms; and to one making the treatment of diseases of women a specialty, the various affections of the nerves to which the female sex are subject, are a source of great anxiety.

During my twenty-three years of practice I have had occasion to use many different nervines, and I believe I have gone through the entire category,but until in very late years I have been unable to obtain a nervine or nerve calmative upon which I could rely in all cases.

I am pleased to say, however, that in Neurilla I have found a nerve calmative that meets *all* the requirements of the physician. I have fully and thoroughly tested it in many and a variety of cases and it has never disappointed me in a single instance. In fact, it has far exceeded my expectations and the claim made for it by the manufacturers.

I find it especially useful in nervousness incident to the menstrual period, and as a nerve calmative during the menopause, I am convinced that it is the remedy par excellence.

It is claimed for Neurilla that it insures nerve tranquility by inducing neural equilibrium, and find such to be the case.

I was recently called to see a young lady eighteen years old, who had begun to menstruate at the age of sixteen. Menstruation had always been attended with nervous phenomena and she had grown worse as she had grown older—it often amounting to decided hysteria. Had been treated for more than a year, but without any improvement.

I found her in a very nervous condition, unable to remain in any one position for more than a minute or two at a time. No particular pain, but just simply extreme nervousness. Gave her Neurilla,—teaspoonful every 30 minutes until she had taken four doses, then every hour until the nervous symptoms were entirely overcome. Instructed her to begin one week before the next menstrual period and take one teaspoonful four times daily, continuing during the menstrual flow with the result that she passed through her menstrual period without any nervousness or other distressing symptoms.

I have had occasion to use Neurilla many times to control irritability and nervousness before and after operating and have always been highly pleased with the results obtained.

I find many of my female patients, especially those of a highly nervous temperament, become very nervous and excited when placed in the chair for examination. To such I give a teaspoonful of Neurilla and I have never yet had it fail to calm the excited nerves.

But it is the excellent results that I have obtained from Neurilla in overcoming the nervousness during the menopause that has caused me to place it at the head of the list as a nerve calmative. Among the many cases in which I have used it during that period, I think the following is worthy of note:

Mrs. J. H., 47 years old. To use her own words, the "change of life" had been working on her for three years, and while at first it had been attended with very little inconvenience, gradually nervous phenomena had developed until she had reached that stage where her mind seemed to be seriously affected, and her husband had been urged repeatedly to place her in an asylum for the insane. This was her condition when I was called in. Also very much emaciated. After a consultation with the family physician, I decided to place her upon such treatment as was necessary to overcome her anaemic condition, and to control the nervous symptoms with Neurilla. Prescribed Neurilla, teaspoonful every 30 minutes until she had become reasonably calm, then every hour. I saw her again in 12 hours and

found her perfectly calm and resting well. I continued Neurilla, teaspoonful four times daily for two months when there being no indication of a return of the trouble I instructed them to discontinue its use, at the same time advising them to begin its use again should any of the nervous symptoms return.

I saw the patient a short time since, the first time in very nearly a year, and learned she was in perfect health and at no time during the intervening period had any of the nervous symptoms returned.

I could mention may cases in which I have had equally as good results with Neurilla, but will conclude by saying that any physician can soon satisfy himself as to the merits of Neurilla by doing as I and many others have done, give it a fair and impartial test.

COMPLICATED ANAEMIA.

By T. J. Biggs, M. D.

Ruth K., age 14, American, admitted November 14th. Diagnosis: Essential anæmia.

The patient had been sent to me by Dr. B., who said that in spite of all treatment employed, his little patient had grown steadily worse, and the parents were well-nigh discouraged. Her condition was associated with menstrual disorders; a year previous she said her disposition seemed to change. She found she was becoming morose and despondent, at times hysterical, and suffering very much from melancholy. Her menstrual order was of the menorrhagic form; her complexion was pallid, waxy, skin puffy without œdema; she was easily fatigued upon the least exertion; the heart was irritable; there was shortness of breath, pulse full, but soft, and at times pulsations in the peripheral veins. There was a disgust for food, imperfect digestion and occasional attacks of gastralgia. In the right apex there was a suspicious dullness, indicating a possible incipient phthisis. Examination of the blood showed a relative decrease in quality and quantity of the hœmoglobin, resulting in the blood being paler than normal. The red corpuscles were lighter in color and showed less tendency to form rouleaux; their character was changed, not being uniform size, some normal, others small (microcytes), others usually large (macrocytes), others irregularly shaped (poikilocytes). The number of corpuscles to a cubic millimetre was about 2,500,500. The white corpuscles were considerably increased in number. A few granular bodies were present, indicating degeneration of the white corpuscles.

The patient was put to bed, secretions regulated, and a half teaspoonful of bovinine was ordered every hour in peptonized milk.

On November 18th, the bovinine was increased to a tablespoonful every two hours.

November 30th, the bovinine was increased to a wineglassful every two hours, given in peptonized milk, alternating with old port wine. The patient at this time showed some improvement, felt stronger, slept better, digestion seemed excellent, bowels regular, and she slept throughout the night quietly.

December 10th, microscopic examination of the blood showed increased quantity and quality of hæmoglobin, and red blood cells 3,000,000 to the cubic millimetre.

December 18th, the patient had gained seven pounds in weight, color good, puffiness of the skin disappeared, and she was taking daily exercise in the open air without suffering fatigue.

December 24th, microscopic examination of the blood showed hæmoglobin almost normal, the red blood cells about 4,500,000 to the cubic millimetre, general condition splendid.

On December 26th, patient was discharged, cured.

The complete, thorough and rapid cure in this case was undoubtedly due to the blood treatment, for all through her course of treatment, outside of cathartics and some mild heart stimulant, she took absolutely nothing but bovinine. Bovinine acts in anæmia in all its forms by first stimulating the blood cells to a healthy proliferation, and secondly, by properly and thoroughly supplying perfect nutrition, carries them on to a full and healthy maturity. Iron in all its forms, while at first undoubtedly beneficial, can only go half way, for it simply stimulates the proliferation of the blood cells and supplies only partial nutrition, the result being that in the majority of cases where it is employed alone, many of the newly born cells, for lack of proper nutrition, atrophy, or become granular bodies.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

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BURLINGTON, VT., August 25, 1902.

EDITORIALS.

VACATION TIME.—Now is the time of year when every sensible person is thinking of taking a vacation. The laughing waters of Vermont's many brooks and lakes, the cool, restful shades of her forests and the enticing green of her mountains and hills all tempt the weary worker to lay down his work and "flee far from the madding crowd's ignoble strife."

Indeed to every one who has worked steadily for ten months of the year it is a duty to get away for a few weeks at the very least from the routine of every day life and come in closer touch with the glories of Nature and God's handiwork. There is nothing that makes a man so stale as to keep plodding along day in and day out without change or recreation. Interest flags and he becomes little better than a machine. But let him drop dull care and work for a few weeks and get away to where Nature has not been violated by the commercial lust of man, and he will look on life and living in an entirely different way. He will cease to be a machine, and becoming a man again, will find his soul absorbing the spirit of charity, kindness and brotherly love.

Nowhere on "the footstool" can man find a better place for a vacation and a tryst with Nature than in dear old Vermont, where one can always find "tongues in trees, books in the running brooks, sermons in stones,—good in everything."

THE VERMONT SCHOOL FOR HEALTH OFFICERS.—The recent annual session of the School for Health Officers was a success in every way. No one who attended the session for 1902 could fail to be impressed with the progressive character of sanitary affairs in Vermont and the enthusiastic interest of those in charge of health matters in our State.

The papers presented were unusually interesting, and that by Dr. Salmon, Chief of the Bureau of Animal Industry at Washington, on The Relation of Animal Diseases to Man, was of especial value.

A large meed of commendation is due the members of the State Board of Health for their untiring labors in perfecting and maintaining so important and valuable an organization as the Vermont School of Instruction for Health Officers. The work they are doing in the interests of Vermont medicine and the health of our people, speaks for itself.

VERMONT DOCTORS IN POLITICS.—There never was a time when so many physicians were evident in politics as now. Whether this condition is due to a more plentiful supply of doctors, or to the fact that the people are just awaking to the especial fitness of physicians for positions of trust, we are not prepared to say. But it is a healthy sign for the medical profession and many benefits will accrue to both the profession and the laity. And it is really about time that a profession so important, numerically and otherwise, began to make itself felt in solving public questions. We have been in the background of public matters too long for our own good. Here, then, is success and honor to every doctor who has

the nerve and ability to make himself a political factor and power in his community. May he bring to his public and political life the same attributes that we are proud to claim for the medical profession.

MEDICAL ABSTRACTS.

Dermatitis Herpetiformis, first described by Professor Duhring of Philadelphia, is probably of commoner occurrence than is generally supposed, more especially in children; two cases are described by William Gottheil of New York, in the June number of the *Archives of Pediatrics.* The resemblance at first sight to an ordinary eczema, dermatitis, or impetigo is marked, and doubtless cases of the disease are not infrequently so classified. The points which distinguish the less common affection are:

1. The extreme obstinacy and chronicity of the malady; it being prolonged almost indefinitely by successive exacerbations or relapses.
2. Its original herpetic character and subsequent multiformity of lesion.
3. The intense pruritus.
4. Its recalcitrancy to treatment.

Any apparent eczema, dermatitis, or impetigo in children presenting these features should be carefully observed; a certain number of them will undoubtedly be found to be cases of Duhring's disease.

Localized Spasms.—Atropine and hyoscine are two drugs of much repute in the treatment of spasmodic disorders of pure nerve origin. The tics about the face, spasmodic torticollis and other localized convulsive seizures at times succumb quickly to one or another of these two drugs. Some cases, however, are more obstinate and will not yield to the usually prescribed dosage, and require heroic treatment. I have seen severe cases of chronic torticollis relieved by hourly administration alternately of atrophine sulphate, grain one hundredth, and hyoscine hydrobromide, grain one two hundredth, continued for weeks and even months, without producing any of the ill effects so commonly met with.—*N. Y. Med. Jour.*

The Preventive and Curative Treatment of Hay Fever.—It is difficult to conceive of a more miserable creature in all the world than the hay fever sufferer. The attack not only makes him exceedingly uncomfortable, but renders him unfit for business or the pleasures of society. Aside from the annoying and continual discharge from the nostrils, the eyes are suffused, the secretion of tears is increased, the nasal passages are obstructed, and an intense burning sensation is experienced: the latter is not entirely limited to the mucous membranes, but not infrequently involves the cutaneous surfaces of the forehead, cheeks and nose. Violent attacks of sneezing occur which are so prolonged, at times, as to completely exhaust the sufferer and bring on severe headache. The condition is one of utter wretchedness, and there is extreme malaise, amounting occasionally to complete prostration. The lightest duties become irksome tasks, and many an active, industrious, and useful member of society is completely incapacitated while "the season " lasts.

For years some convenient means of relief has been sought. Change of scene does very well for those, unfettered by business, who can afford to travel. But to many very worthy people a change of scene is out of the question. Naturally the greater number of the afflicted are accustomed to look to the medical profession for the help they need. But what has the medical profession actually accomplished for the permanent relief of the sufferer or the cure of his ailment? There is scarcely a sedative, astringent, tonic, nervine ,or alterative drug in the materia medica that has not en-

joyed an evanescent reputation as a useful remedy in the treatment of hay fever. Until the discovery of Adrenalin, each had been as much of a disappointment as its predecessor and none had afforded more than the merest temporary relief.

There is increasing evidence that Adrenalin fully meets the indications as a remedial agent in hay feber. It controls the nasal discharge, allays congestion of the mucous membranes, and in that manner reduces the swelling of the turbinal tissues. As the nasal obstruction disappears, natural breathing is materially aided and the ungovernable desire to sneeze is mitigated. In short, a season of comparative comfort takes the place of the former condition of distress and unrest. Adrenalin blanches the mucous membrane by vigorously contracting the capillaries, and thus reduces local turgescence. It strengthens the heart and overcomes the sense of malaise so frequently a prominent feature in cases of long standing.

In the treatment of hay fever the Solution of Adrenalin Chloride should be used. This preparation is supplied in the strength of one part Adrenalin Chloride to one-thousand parts Normal Saline Solution, and is preserved by the addition of 0.5 per cent Chloretone. The 1-1000 solution should be diluted by the addition of four parts Normal Salt Solution, and sprayed into the nares with a "Cocaine" atomizer. In the office, the 1-1000 solution may be applied in full strength. A small pledget of cotton is wrapped about the end of an applicator and moistened with a few drops of the solution (1-1000). The speculum is then introduced, the patient's head is tilted backward ina position most favorable for thorough illumination by the head-mirror, and the visible portions of the lower and middle turbinate bodies, and the septum, are carefully and thoroughly brushed. The same application is made to the other nostril, when usually relief follows in a few moments. Should the benefit prove only partial, the 1-500 solutino may now be sprayed into both nares, and a few drops instilled into both eyes. The effect of this treatment may be expected to last for several hours. Indeed some physicians report that it is necessary to make but one thorough application daily to afford complete relief.

It is also recommended that Solution Adrenalin Chloride be administered internally in 5 to 10 drop doses, beginning ten days to two weeks prior to the expected attack. In explanation of the beneficial effect of the drug when used in this manner, the suggestion has been made that hay fever is essentially a neurosis, characterized by a local vaso-motor paralysis, affecting the blood supply of the eyes, nose, face, and pharynx, and occasionally of the laryngeal and bronchial mucous membranes. Adrenalin overcomes this condition, restores the normal balance in the local blood pressure, and thus aids in bringing about a cure. The profession is to be congratulated that it has at last an agent that, if not a specific, fulfills the therapeutic indications more completely and with greater satisfaction than any other remedial measure recorded in the history of medicine.

BOOK NOTICES.

SAUNDERS' MEDICAL HAND-ATLASES. — Atlas and Epitome of Operative Surgery. By Dr. Otto Zuckerkandl, Privatdocent in the University of Vienna. From the Second Revised and Enlarged German Edition. Edited, with additions, by J. Chalmers Da Costa, M. D., Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia, etc. Second Edition, Thoroughly Revised and Greatly Enlarged. With 40 colored plates, 278 text illustrations, and 410 pages of text. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $3.50 net.

This excellent work, one of Saunders' well-known Medical Hand-Atlases, needs no further recommendation to English-speaking readers than its author's name—Dr. Zuckerkandl. The rules and methods of surgical

procedure are stated with the clearness that springs from definite knowledge and the emphasis born of conviction. The operations of modern surgery are described lucidly and tersely, making the book a worthy guide alike to the student and the practicing surgeon. The verbal descriptions are most accurately reinforced and illuminated by a large number of original colored lithographic plates and text cuts.

In this new edition the work has been brought precisely down to date. The revision has not been casual, but thorough and exhaustive the entire text having been subjected to a careful scrutiny, and many improvements and additions made. A number of chapters have been practically re-written, and of the newer operations, all those of special value have been described. The number of illustrations has also been materially increased. Sixteen valuable lithographic plates in colors and sixty-one text figures have been added, thus greatly enhancing the value of the work. There is no doubt that the volume in its new edition will still maintain its leading position as a substitute for clinical instruction.

QUIZ COMPEND NO. 15: A COMPEND OF GENERAL PATHOLOGY.—By Alfred Edward Thayer, M. D. Containing 78 illustrations, several of which are printed in colors. Published by P. Blackiston's Son & Co., 1012 Walnut street, Philadelphia. 1902. Price, 80 cents.

For a *multum in parvo,* up-to-date compend this little book on pathology cannot be beaten. It is so concise and complete that it makes a very forminable rival of many larger and more voluminous text-books. The cuts are unusually numerous and well executed and in many respects are better and more happily chosen than those in some of the more pretentious works on pathology in common use. In every way this small volume should be able to perform its mission and it deserves all the popularity it is winning.

In cases of neurasthenia, Neurilla has acted like a charm. I shall continue to use it always as it gives me good results.

T. J. DUNLOP, M. D.

40 Walnut St., Atlanta, Ga.

A POWERFUL DIURETIC.—Although the materia medica abounds in drugs having a diuretic action but few of them can be considered pure diuretics, the majority producing their effect in an indirect manner. Among the pure diuretics theobromine has been extensively employed in late years in the form of salicylate. This preparation, however, is not free from irritating effect upon the gastro-intestinal tract owing to the contained salicylic acid, and for this reason Dr. Impens, of Brussels, after considerable experimentation succeeded in producing a double salt of theobromine sodium and acetate of sodium, to which the name agurin has been given. This preparation has been made the subject of extensive clinical studies in the clinics of Professor von Litten, of Berlin, Destree, of Brussels, Buchwald, of Breslau, and von Ziemssen, of Munich. The results of these tests have shown that in the dropsy or cardiac disease, agurin is a prompt and reliable diuretic free from any irritating effects upon the digestive organs or kidneys, while in some cases of ascites due to cirrhosis of the liver and in cases of edema from chronic interstitial nephritis, without marked destruction of the renal epithelium, the drug acted efficiently. The diuretic value of agurin is further confirmed by some conclusions presented by Dr. A. C. Barnes (Medical Record, May 24, 1902) in a discussion before the American Therapeutic Society, according to which the acetates form double salts with theobromine which are soluble and are powerful diuretics, of which agurin is a type.

NEWER REMEDIES.

A Remarkable Publication.—The attention of the readers of this journal is directed to the catalogue recently issued by the H. K. Mulford Company.

The catalogue is completely classified and contains a full and complete table of contents and Therapeutic Index. Every physician should have a copy of this new list, as he will find it a ready and valuable book of reference.

For the more general introduction of the metric system, metric dosage on Fluid Extracts is included. This no doubt will be followed out more largely in future lists.

Much space has been allowed in the new catalogue to special products and valuable information is furnished as to therapeutic action, dosage, etc.

Of special value and importance to the medical profession are the departments devoted to antitoxins and vaccines, describing fully the method of preparing the various biological products, in the preparation of which the Mulford Company have taken a most active part. To enhance and beautify the appearance of the catalogue, and to bring more vividly before its patrons the unsurpassed facilities which the H. K. Mulford Company enjoy for the scientific preparation of these products, half-tone reproductions appear to illustrate the subject. The reproductions of the firm's new laboratories at Glenolden are convincing proofs of the sole purpose and desire of the firm to keep step with scientific advancement. In these new laboratories, entirely separate and removed from each other, and from the general pharmaceutical laboratories, all the antitoxin, vaccine, and various biological work is carried on. The very complete and thorough equipment, and the fact that each department is under the direction of scientific men, with world-wide reputation, is another sure evidence of the firm being in fullest accord with the latest scientific advancement.

The pharmaceutical laboratories of the firm, in Philadelphia, have by no means been overlooked in the work of improvement. A handsome new eight story building with two basements has been erected, adjoining their old pharmaceutical laboratories, and all the buildings have been equipped with the latest electrical devices, thus reducing the cost of manufacture to a minimum. In short, their entire mechanical equipment has been completely reconstructed, and brought up to the highest state of efficiency attainable. Economy has not been observed where improvements could be made.

While the growth of this firm is very unusual, yet it is not remarkable, because it is only the natural result and reward of the energy and honest effort put forth. The firm has only

one aim, viz: to bring before the medical and pharmaceutical professions the direct results of the latest scientific research work in the lines of bacteriology, pharmacology, and physiological chemistry.

Of much importance to the medical profession are some of the newer products of the firm, which are fully describeed in the catalogue, of which Somnos and Protan are being most favorably received.

Somnos is a definite synthetic product formed by the synthesis of chloraethanal alcoholate with a polyatomic alcohol radical. This product gives prompt dedative and quieting effect and produces natural sleep without affecting the heart or general circulation.

Protan is formed by the synthesis of tannin with nucleo-proteid. The astringent effects are not imparted to the system until the intestinal tract is reached where the tannic acid is slowly evolved and its astringent properties exerted exclusively upon the entire intestinal tract from the duodenum to the colon. Protan is of especial advantage in the treatment of children's diseases peculiar to the summer season.

The firm of H. K. Mulford Company is to be congratulated upon the successful development of its business and the rapid strides it is making in advancing scientific work.

The Question.—After many catisfactory trials of a remedy have you ever experienced a time when all the indications were the same, yet the article prescribed did not seem to give results?

You invariably presumed that the old-standby had lost its efficacy when in all probabilities you were not using the genuine product but a substitute.

In diseases of women such as leucorrhea, endometritis, gonorrhea, vaginitis, etc., where so much depends upon actual results, it is imperative that the genuine Micajah's Medicated Uterine Wafers are used and not a substitute.

Only successful preparations are imitated, hence the large number of substitutes of the genuine Micajah on the market.

Substitutors Steal Physician's Patients.—Incidentally, the Antikamnia Chemical Company is after "Counterfeiters" and "Substitutors" with a sharp stick. Their work in New York City is, no doubt, well known to our readers and they have now broken up a counterfeiting gang in New Orleans.

There can not be two views on the subject of substitution. It is swindling, pure and simple. Antikamnia and Antikamnia Tablets are made only by The Antikamnia Chemical Company, of St. Louis, Mo., and when a physician prescribes either Antikamnia Powdered or Tablets he means the products of that firm. If his patient does not get them, a fraud is perpetrated, not only upon The Antikamnia Chemical Company, but upon the physician and his sick patient for whom the medicine was intended.

In other words, the doctor's patient is taken out of the doctor's hands, transferred absolutely to the Substitutor's care and then given whatever remedy the substitutor thinks best. All this, irrespective of the doctor's diagnosis. In short, the treatment is in accordance with the "diagnosis" made by the substitutor. And as all substitutors are thoroughly saturated with avarice, greed and utter disregard of the most sacred rights of others, the fate of their victims can well be imagined. It is the purpose of The Antikamnia Chemical Company to expose and punish this crime wherever they locate it, and they have notified the trade that the least punishment "substitutors" of this kind can expect, is exposure of their guilt.

Ecthol is an American preparation made from a mixture of the fluid extract of Thuja and Echinacea augustifolio. The latter is a plant belonging to the natural order Compositae, which grows in North America. The fresh root of this plant is in high favor with the Indians as an antidote against the bites of

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ORIGINAL ARTICLES

THE ETIOLOGY OF TYPHOID FEVER*

By Jas. M. Hamilton, A. B., M. D., Rutland.

Mr. President and Gentlemen of the Vermont State Medical Society:—

In discussing the etiology of typhoid fever in this symposium, I must present in a great degree a resume of the recent literature and a citation of experiments. Since the pandemic of typhoid fever which followed in the wake of the Spanish-American war, this disease has received the attention of many noted experimenters, but it seems hardly probable that there will be so marked a change in the theory of transmission of typhoid as there has been so recently in malarial and yellow fevers.

I shall not review with you the older theories of the causation of enteric fever by decomposing sewage, etc., but will come at once to what practically all who have studied the matter acknowledge to be the true etiological factor of typhoid fever, the bacillus typhi abdominalis, or the bacillus typhosus of Eberth.

This germ[1] is a motile aerobic or facultative anaerobic non-liquefying bacillus, about 3 u in length, and ⅝ u in breadth. It does not bear spores and is readily cultured in a variety of media at room temperature. The bacillus typhosus was first described by Eberth in 1880 and 1881, and independently by Koch at about the same time, although it was first obtained in pure culture by Gaffky in 1884. It fulfills two of the requirements of Koch's law. It is constantly present and can be cultivated outside the body in a specific manner. But the third has not been, and probably will not be fulfilled until there are volunteers who will risk their lives for the advancement of science as those more than brave soldiers did in Camp Leazar, Cuba, under Drs. Reed and Carroll.

Experiments on animals have been well nigh fruitless, for they show the greatest immunity from this disease. Gaffky[2] experimented on five apes, sixteen rabbits, thirteen guinea pigs and twenty-six other domestic animals by feeding them Eberth's bacillus and by injecting pure cultures subcutaneously and into the peritoneal cavity. His results were negative, as were those of many other experimenters, such as Fraenkel, Simmonds, Seitz and Sirontin, all of whom failed to produce in animals any disease closely simulating typhoid fever, although many of their experiment animals died after a variable lapse of time. Sirontin brings out the fact that the fate of these animals depended upon the quantity of culture introduced rather than upon the growth of the microbes within the body and the development of the specific disease of typhoid fever. He also states that sterilized cultures were as fatal to the animals as were the most virulent.

Breiger's experiments lead him to believe that a ptomaine is developed during the growth of the bacillus typhosus in artificial culture media. This he has named "typhotoxin," and believes it to be the cause of death in the animals succumbing to the experiments. Its role in the causation of typhoid is as yet undetermined. As previously stated the bacillus typhi abdominalis is always present in typhoid fever. It is found in the spleen, liver, intestinal lymphatics, mesenteric glands, rose spots, kidneys, urine and fæces. V. Struhlern[3] has found it in the sputum. A few claimed to have found it in the blood, but in 1896, Sternberg[4] believed that these results were obtained by accidental contamination of the culture media through careless technique. Auerbach[5], however, in

* Read at the 88th Annual Meeting of the Vermont State Medical Society.

1900, declared that by improved methods he had succeeded in isolating the bacillus in seven out of ten cases, and in July of this year Rufus I. Cole[6] described his technique whereby he isolated the bacillus in seventy-five per cent. of cases in the second week of the disease.

Of all the habitat of this microbe within the body, I desire to call your attention to two only, the urine and fæces.

All authorities warn us that the stools must be thoroughly disinfected, but they are lax in their attention to the urine. Eberth's bacillus is found almost constantly in the fæces for the first three weeks of the disease, but only rarely thereafter, unless there is a relapse. On the other hand the urine, free from infection at first, begins in twenty-five per cent of cases at about the third week to contain typhoid bacilli in almost pure culture, and instead of their disappearing after a short period they not only continue, but may increase in great numbers within the bladder (for you know they may be cultured in urine as a medium without the presence of oxygen) and may persist almost indefinitely. Cases are constantly reported where the urine contains the germ months and even years after the disappearance of typhoid fever. Dr. Cushing[7] of Baltimore has reported one case of five years' standing. Dr. Richardson[8] of Boston, P. Horton Smith[10] of London, and Norman C. Gwyn[11] have written exhaustively on this subject.

I desire to impress this as a most important and practical matter for the consideration of each one of us. Do we pay sufficient attention to the disposal of the urine of our typhoid convalescents? It is not the man whose life is despaired of that is the great source of danger, but the one about his usual occupation recovered from his fever with nothing left but a slight cystitis, or even only a slightly turbid urine.

In army life this menace is even greater than in civil. Strict discipline is needed to control the deposit of the soldier's fæcal matter, but no sooner does darkness draw on than the disciples of Mars refrain from the seemingly unnecessary tramp to the distant sinks and hie themselves behind their own, or more likely their neighbor's tent and deposit on the soil a fluid estimated by Petruschky[12], if they be convalescent, to contain up to one hundred and seventy million bacilli to the cubic centimeter.

Once outside the body the activities of this microbe are not at an end. Unlike the much-sought-for germ of yellow fever, no intermediate host is necessary to complete its cycle of existence. Deposited upon the soil it at once begins a prolific multiplication. If its lot be cast in sewage, it finds there a most agreeable pabulum; in milk its growth is both luxuriant and perennial. Even in sterile water its development is checked only after several weeks.

Unlike the tubercle bacillus it does not remain dormant, so to speak, until it again enters an animal organism, but continues to increase in numbers at a marvelously rapid rate. Thus it is that the amount of contamination is out of all proportion to the quantity of poisonous material originally introduced. The discharges from one single case of typhoid fever have been known to cause some of the most widespread epidemics. Infected water supplies are naturally the most frequent means of conveying this germ to its victims, for more of water than of any other substance is introduced into the alimentary canal from the earth's surface without being subjected to a germ destroying temperature. Next in order of frequency are infected milk supplies. I find one author[13] accounting for an epidemic in a boarding house by claiming that the udders of the cows furnishing the milk had been washed in infected water. I presume to say he had boarded elsewhere or he might have suspected a more intimate relationship between the two supplies. Typhoid epidemics have been known from ice cream, ice, and garden stuff. You are all familiar with these aspects of the case, and I will not take your time from the other papers on the program in this discussion.

There is one more point, however, in the consideration of the germ outside the body that I do wish you to consider, and that is, the part played by flies in the dissemination of this microbe and its introduction into the material ultimately destined for the human digestive tract.

Victor C. Vaughan: and his associates in their report to the surgeon-general of the United States army, called attention to the importance of flies in the spread of typhoid fever infection. Many writers both before and since have given the matter much attention and I believe you will soon learn of laboratory experiments that will prove conclusively that their role is not a minor one.

The fly has a deservedly world-wide reputation as a connoisseur of fæcal material, and you can have no doubt of his ability as a common carrier if you have ever observed him in an excursion across your note paper fresh with ink. Do you consider him then, a desirable sanitary visitor to your kitchen after his early morning excursion to the cesspool and privy vault where the discharges from a typhoid case are emptied?

G. V. Poor states that one fly may have as many as twenty-five million descendants in one year. If any of you visited Chickamauga Park during the late unpleasantness with Spain, you will surely declare that you have seen at least a dozen robust females and their whole season's output swarming about each and every sink visited by typhoid convalescents and ready to transfer the infection to the altogether too near mess tents.

Not only does the fly carry infected material on its exterior, but it is possible that the bacilli ingested with its food may be discharged alive in its excreta.

Domestic animals have at times been considered instrumental in the spread of typhoid, but the experiments cited prove conclusively that they cannot acquire the disease themselves, and Wm. Royal Stokes in the Maryland Medical Journal reports experiments on a number of animals, allowing them to ingest large numbers of Eberth's bacilli, and then examining their stools for the germs. His results with five hundred slides were totally negative, as were those of other experimenters.

Outside the body this is a hardy germ,resisting cold to a remarkable degree. Wm. Hallock Park[15] reports that a number of bacilli remained alive in ice formed from infected water twelve weeks after freezing. The bacilli in fæces showed only about two-thirds diminution in numbers after five weeks' exposure to a temperature varying between zero and 28 degrees Fahrenheit. He believes, and others confirm his opinion, that fæcal matter could remain infected during the entire winter, and spread typhoid in the spring season. An epidemic in Richford of this state, in 1877, seems to demonstrate this. During the winter a family living on a rise of ground about twenty rods from a public well, had typhoid; their slops were thrown upon the ice and snow. In the spring with the first warm weather this material was washed down a path and carried by the surface water into the well and every family taking water therefrom was contaminated.

Park also concludes that ice from infected water is not safe for use until after mid-summer.

Heat, however, has a very marked action. Sternberg found the thermal death-point to be 132.8 F., while Gaffky considered 140 degrees necessary for their total destruction. If available, the incineration of all contaminated material would be the surest method of prophylaxis.

Next in value comes heat of a more moderate degree; boiling water, steam under pressure, streaming steam, superheated steam, and dry hot air, effective in the order named.

Formaldehyd gas is claimed by some to be thoroughly effective, but unless very carefully used it fails of its object.

For the disinfection of stools and urine, no better chemical antiseptic is known than chlorinated lime, used in the proportion of one to

ten. A quantity should be allowed to stand in the receptacle into which the discharges are voided, so that a thorough admixture will be assured. Allow this to stand fifteen minutes and it may safely be buried or thrown into the public sewer.

Bi-chloride of mercury if used in this way must be in exceedingly strong solutions for although the bacillus is killed in 1 : 10,000 aqueous solutions, the presence of albumin so reduces its potency that solutions of at least 1 : 100 are necessary for the disinfection of fæces and urine. Carbolic acid in one per cent aqueous solution is destructive after two hours' time. Sodium chloride in practically saturated solutions does not destroy the bacillus after an exposure of several weeks.

Louis C. Parks[16] and Samuel Redeal suggested the use of five-grain tabloids of acid bisulphate of sodium for disinfecting all suspected drinking water. They claim that each tabloid will render sterile one pint of water in fifteen minutes. These were devised for soldiers in the field.

So far in this paper have considered only the possibility of the entrance of the germ through the alimentary canal of its victim. The frequent presence of the bacilli in water and milk, and the readiness with which they are thence transferred to the digestive system of human beings have been noted. Nearly all epidemics can be traced to one of these two sources —contaminated water or milk.

I find one epidemic reported[17] as caused by direct contagion. A school of three hundred boys was said to have been infected through person to person contact with two boys who had been in an infected locality. I presume to say that in this case proper methods of investigation would have revealed some means by which infected material was introduced into the food or drink of the students.

Some have brought forward the theory of the transmission of the microbe by air currents and thus entrance through the respiratory organs, but although Eberth's germ will survive almost complete dessication for eight of ten weeks, this has never been proven by laboratory experiments, or by any chance contamination.

Sir Charles Cameron[18] reports that he believes the epidemic of typhoid fever in Dublin to have been caused by air borne germs from the evaporation of infected water. In those parts of the city where the atmosphere was dry and the exhalation from the ground tended to evaporate rapidly the disease was about five times as prevalent as in houses over a clay soil where the evaporation was slight.

Buhl[19] and Pettenkofer of Munich advance the same theory.

Fomites seem to be harmless unless through them the infection is introduced into food or drink.

For obvious reasons, direct inoculation has never been attempted.

The question of predisposing causes is yet open to much discussion.

Theoretically it seems probable that during an epidemic those would be more frequently attacked who have a disordered digestion or any catarrhal disease of the intestines, but in the First Vermont Volunteer Infantry in 1898, only eight and a half per cent of those taken with typhoid had been under care for diarrhœa or dysentery within one month from date of admission to sick report with fever, and only twenty-five per cent had received any treatment for bowel trouble previous to the beginning of the disease.

The experiments of Alessi mentioned by Sternberg[20] show that animals after an exposure of three to seventy-two days to the vitiated atmosphere over a privy opening succumb to an injection of one-fourth to one-half a cubic centimeter of typhoid culture, within twelve to thirty-six hours, while control animals were not affected by the same dose of the same culture. The animals attacked even showed a hemorrhagic enteritis and an increased volume of Peyer's glands. This exposure to contaminated air may have a similar influence on man.

Another question that would properly come within the scope of this paper if time permitted, is the role played by the bacillus typhosus in the causation of other maladies than true symptomatic enteric fever.

A great number of cases are given in literature where abscesses and suppurative conditions are caused by pure cultures of Eberth's bacillus. There seems to be no doubt that at times this becomes a pyogenic germ.

One case of particular interest is reported[21] where a cystitis was induced by use of a catheter contaminated by the typhoid bacillus. This germ was found in pure culture.

I have had one case of abscesses of the recti muscles following typhoid fever. They were absorbed under simple expectant treatment.

Axilliary abscesses of seven years' standing, osteomyelitis of six years, abscess of tibia of seven years, and many others are reported.

Schneider[22] found the bacillus typhosus present in three persons not having typhoid fever, and who never had it. He believes in the possibility of autoinfection.

And now, gentlemen, if I have succeeded in calling attention to the etiology of typhoid fever in such a manner that it will help any of us to guard more strenuously against the cause of infection, I shall consider my time very well spent.

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PATHOLOGY OF TYPHOID FEVER.*

By O. W. Sherwin, M. D., Woodstock.

In offering a few words on the pathology of typhoid fever, I think that in making three divisions of the subject I can better make my understanding of the matter clear to others.

1. The bacilli.
2. Toxins.
3. Other germs.

1. So far as the bacillus is concerned, it has been found in every "nook and corner" of the body—in the blood, urine, and most of the secretions and excretions, in various glands, as the liver, spleen, and lymphatics, in the bone marrow, in various exudates, and in the rose spots, and various localities where suppuration exists.

2. The presence of bacilli and the resulting intoixcation from their ptomaines, explains the phenomena of typhoid fever in its uncomplicated form.

It appears that the most usual place of invasion is the glands of the intestine known as Peyer's patches. While the stages of hyperplasia, inflammation, resolution, or ulceration are going on in the glands, the bacilli are multiplying in other parts of the body with corresponding increase of toxin material until the system is overwhelmed. Regarding the struggle for immunity, which is the sum of the phenomena of an uncomplicated case of fever, too little is known to make a definite statement We do not quite know whether an antitoxin is formed in the blood, and if so, what part leucosytosis plays in its formation, but the fever runs its course in from two to four weeks and the patient returns to his normal condition.

3. Concerning other germs, perhaps the pus germs are the most common: hence, after irritation by the typhoid bacillus the ever present pus germ may complicate matters any-

* Read at the 88th Annual Meeting of the Vermont State Medical Society.

where in the body. So we find various ulcerations, perforations, abscesses, etc. Later we meet the abscesses of muscles, periostitis, and other calamities due to invasion of pus germs.

THE CLINICAL HISTORY OF TYPHOID FEVER.*

By John Waite Avery, M. D., Proctor.

For convenience of discussion the clinical history of the enteric fever has been divided into periods. Owing to the complex nature of the disease, and the often insidious mode of onset, these divisions must be artificial and arbitrary, depending upon the relative importance the author attaches to the symptoms or the lesions. Older writers recognize four stages:—those of prodromes, of rising temperature, of climax, and of defervescence. Later two periods were described, the first including the time of development of the attack, and the second the period of improvement and defervescence. Another division gave the stages of incubation, of invasion, of intestinal glandular enlargement, of ulceration or sloughing, of lysis, and of convalescence. A more recent and rational division has been made by Wunderlich, based upon the temperature of the disease. His conclusions from extended observations are that in uncomplicated cases the febrile movement has a typical course; that deviations from this course in obscure and complicated cases are not such as to prevent a diagnosis from the temperature curve alone, if the physician be familiar with the ordinary deviations. Well-marked uncomplicated cases have a duration of three to four weeks. He divides this time with reference to the temperature into four periods, each having a special temperature curve, and each lasting about one week. Upon these observations, German authors have stated six periods, namely, the stage of prodromes, the first, second, third and fourth weeks, and the period of convalescence. These periods, be it understood, may be modified by complications or treatment, and through sequelæ or relapses the duration of the disease may be indefinitely prolonged.

In the first or prodromal period the symptoms may develop slowly and most insidiously. The patient complains of a general feeling of weariness, of loss of appetite, slight nausea, and sometimes diarrhœa. The mind is dull and mental exertion is very fatiguing, sleep is broken and unrefreshing. Headaches, usually frontal, and becoming more severe toward evening, are experienced, also pains in the back and limbs. The face lacks expression, there may be a slight nose-bleed, and the tongue is heavily coated with white fur. Sometimes the headache is so severe and continuous that a diagnosis of meningitis is made. Pain in the back of the neck and local tenderness there may call forth a diagnosis of cerebro-spinal meningitis. In malarial regions the onset may simulate intermittent fever with several distinct paroxysms, but the fever soon assumes the remittent type, and typhoid becomes clearly defined. Delirium is sometimes a marked symptom at the outset. Again, pneumonia may be the most pronounced initial symptom, and the typhoid characteristics of the case not become entirely clear for eight to ten days, when the fever does not terminate by crisis, but continues on in the ordinary course of typhoid. Bronchitis may be severe at the outset, especially in children, but the continued elevation of temperature will assist in a correct diagnosis. Rarely, an acute nephritis ushers in the disease, and may entirely mask the real nature of the trouble. In early childhood typhoid is "characterized as a fever more often with nervous symptoms than with intestinal symptoms." Occasionally the disease begins abruptly without prodromes. A person apparently in full health, is seized with chilliness. followed by fever, general malaise, and headache, and soon pronounced symptoms of typhoid rapidly develop. In children this is not uncommon, but rather is as frequently seen as the usual gradual beginning.

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During the *first week* the symptoms of the prodromal period are intensified. The facial expression is very dull, the patient is silent, and not inclined to mental effort, though when roused his faculties are clear. A pink flush has mounted over both cheek-bones. He complains of great weariness and weakness, and can scarcely stand when placed on his feet. The severe headaches are apt to continue, usually frontal, but sometimes occipital; his eyes are intolerant of the light, though the conjunctivæ are not injected. His ears are filled with buzzing and ringing noises. He may have occasional slight nose-bleeds. His skin is unusually hot and dry, though sometimes moist and even bathed in sweat, especially in the early part of the day. The pulse is rapid, from one hundred to one hundred and ten, full in volume, but of low tension and often dicrotic. The fever steadily increases in some cases. It is distinctly remittent in type, with exacerbations in the latter part of the day, and remissions in the morning. The evening temperature in these typical cases rises a degree to a degree and a half higher than the night previous. His appetite is gone and even the suggestion of food is often repugnant. The mouth tastes badly, and he has excessive thirst. His tongue is swollen, pale, and indented at the margins with the teeth. By the fifth day it becomes dry and smaller, the coating peels off with the epithelium in patches, leaving a very red, dry, and glazed surface. It is also somewhat tremulous when protruded. The bowels are more or less loose, amounting sometimes to a diarrhœa, with several movements daily. If there is a tendency to constipation even mild purgatives act with unusual energy. At first the stools consist of thin, brownish fæces, with a strong odor. When the fæcal discharges stand they separate into two distinct strata; the upper one of liquid, containing salts and albumin, and the lower consisting of epithelial debris, remnants of food, and crystals of triple phosphates. The abdomen is slightly distended, and there may be some tenderness and gurgling in the right ileo-cæcal region. This latter condition is not of much value symptomatically, as it is present also in diarrhœal affections. The urine is lessened in amount, urea is increased, chlorides are diminished, and occasionally a trace of albumin is found. His sleep is disturbed by dreams, he is restless, and awakes unrefreshed. His mind may be confused at night, though there is no active delirium. He may have a bronchial cough, and a few moist rales may be found posteriorly on auscultation. Toward the end of this period the area of splenic dullness is usually increased and enlargement of the organ may be demonstrated. There also may appear by the seventh day, though it is often delayed until the tenth or twelfth, a few rose-colored spots, usually on the abdomen, but sometimes on the back and extremities. They do not come all at once, but in successive crops, each spot lasting from two to five days, then disappearing leaving only a slight brownish stain.

By the beginning of the *second week* appear the characteristic disorders of the nervous system. The restlessness and complaining of pains has disappeared and the patient has become apathetic or even somnolent, though he is easily aroused and responds to questions intelligently, declaring that he is not very sick. His indifference is partly due to the deafness from which he suffers. Between the seventh and tenth days mental disturbances may appear. Sometimes it is only a low muttering delirium, again it becomes more active, or is wild, furious and violent in the extreme. These symptoms usually accompany high temperature and very rapid pulse. During this period the fever remains elevated and the morning remission is slight. The pulse is rapid and not dicrotic. In severe cases the delirium is a low monotone, accompanied by picking at imaginary objects on the bedclothes and by subsultus tendinum. The urine and fæces are often passed involuntarily in this stage, or the urine may be retained. The abdomen is more distended, tenderness and gurgling, especially in the right

ileo-cæcal region, is more marked, the diarrhœa increases, and may be of greenish color and flocculent, the so-called "pea-soup"stool. Death may occur during this week with marked nervous symptoms, or near the close of it from hemorrhage or perforation. In mild cases the fever declines and the temperature may be normal by the fourteenth day.

With the opening of the *third week* the typhoid symptoms develop in intensity. The stupor is increased and the patient is aroused with difficulty. He lies on his back too weak to move, with mouth open and teeth covered with sordes, his face sunken, dusky, with a faint reddish tinge in the center, and his lips dry and cracked. The urine and fæces may continue to pass involuntarily. The pulse remains frequent, from one hundred and ten to one hundred and thirty, and is compressible. New crops of the eruption appear, and, if the patient has perspired freely, sudamina outbreaks are extensive. Bed sores are apt to form at this time. Complications arising during this stage may be with the lungs; the heart increases in feebleness,and there are aggravated nervous symptoms with delirium. Perforation and hemorrhage may also occur. Cases only moderately severe begin to show a marked morning remission in temperature, and a gradual decline of fever during the latter part of this period.

In the *fourth week* the fever becomes decidedly remittent, the morning and evening temperatures are increasingly lower, tending steadily toward the normal. Finally the type of the fever is decidedly intermittent, with a normal morning temperature and a slight rise in the evening. The patient is fully aroused from his stupor, and instead of indifference there is sharp complaining. His sleep is quiet and unbroken, and he awakes greatly refreshed. The tongue and gums become clean, the mouth is moist, and his appetite begins to return. Diarrhœa ceases and there is a tendency to constipation. Distention of the abdomen subsides. The area of splenic dullness shrinks to normal. The pulse gradually becomes less frequent and fuller.

In very severe cases the *fourth* and even the *fifth* week may present an aggravated picture of the third with the patient growing weaker, the pulse more rapid and feeble, the tongue dry and the abdomen distended. He is in a condition of profound stupor with low muttering delirium and subsultus tendinum. Heart failure and complications are the dangers of this period.

With the disappearance of the fever convalescence is established. The appetite is good or even keen. Strength gradually returns, and there is a rapid gain in weight, and a sense of returning mental and physical power. Still he is easily fatigued and the convalescence is tedious. It may be disturbed by complications and sequelæ. During the early part of this stage he may have slight febrile or even subnormal periods of temperature induced by overexertion—physical or mental—or solid food. These recurrences of the fever often arise without discoverable cause.

To more fully complete this sketch of a disease of protean form I will quote from Wilson: "Many cases run a very mild course, so that the patient is scarcely confined to bed. Others are at first severe, but speedily become mild in character, and terminate in restoration to health; while still others, in their middle course, undergo a sudden or even fatal aggravation. Striking modifications of the course of the disease are occasioned by the prominence of certain symptoms or groups of symptoms which may become so serious as to throw the original disease into the background."

PRIZE CONTEST.—The Maltine Company announces that two hundred and eight essays on "Preventive Medicine" have been entered in competition for the two cash prizes—one thousand dollars and five hundred dollars, respectively—which the firm offered last February. These essays are now in the hands of the three judges, Dr. Daniel Lewis, of New York, Dr. Chas. A. L. Reed, of Cincinnati, and Dr. John Edwin Rhodes, of Chicago, and their decision is awaited with great interest by the medical profession at large.

DIAGNOSIS OF TYPHOID FEVER.*

J. D. Brewster, M. D., Windsor.

To absolutely determine the positive diagnosis of typhoid fever during the first few days of the disease is almost an utter impossibility, even if we should be fortunate enough to have the patient this early under our observation.

The patients usually present themselves, complaining of not having felt well for some days and giving a history of feeling fatigued, with headache, perhaps chilliness, possibly diarrhœa, and a general feeling of discomfort accompanied by elevation of temperature.

The pulse of typhoid has unfortunately no distinguishing feature. The headache, which usually accompanies the disease, may or may not be of a severe nature, and very often finds its location in the back of the head or neck. The first absolutely distinguishing feature noted is the regular variation in morning and evening temperature, which, should our case be a typical one, serves readily to distinguish the disease. This temperature change should not be confounded with the fever of acute tuberculosis, which has an elevation in the morning with no marked variation.

On or about the seventh or tenth day the characteristic rash, which disappears on pressure will be noted appearing over the abdomen. This remains two or three days and forms one of the surest diagnostic symptoms of this fever; however, it is not universally present, and spots are not as numerous in typhoid fever as in typhus fever.

In many cases attacks of epistaxis are observed during the first few days, and there may also be small streaks of blood in fæces due to the intense congestion of the area of the disease, but this does not affect the temperature or pulse, as does the copious hemorrhage which occurs later, caused by the ulceration of the small arteries in the intestines.

If pressure is applied in the right iliac region we usually find tenderness and slight gurgling. If the fever begins, as is sometimes the case, with a severe chill, it may be hard to distinguish from malaria, especially when that trouble prevails, but we find the fever of typhoid is not affected by quinine, as in malaria, and the diagnosis may also be differentiated by the examination of the blood.

The bowels may or may not be constipated. If diarrhœa is present, the fæces are of a greenish color and very offensive. I do not consider examination of urine as reliable in typhoid, as the same changes may be found in acute tuberculosis and other diseases. After the first week there is always a peculiar odor to a typhoid patient, which may be at once recognized upon entering the room. At the present time, the laboratory furnishes an important aid in a positive diagnosis, if any doubt remains after the first few days of disease.

Dr. Lovett Morse of Boston, Mass., states that "the chief laboratory tests for typhoid fever are, (1) the Widal reaction; (2) the examination of the urine and fæces for typhoid bacilli; (3) the examination of the blood or of the rose spots for these organisms; (4) the diazo reaction in the urine; and (5) the leucocyte count.

"The occurrence of leucocytosis in the course of a typhoid indicates the presence of some complication, often an impending perforation of the bowel. The Widal reaction and the leucocyte count should be considered, in the laboratory, of the greatest practical value in connection with recognition of typhoid."

The physicians of the state should appreciate the advantage we have of obtaining these aids by sending specimens to the Laboratory of Hygiene at Burlington, where prompt attention is given to them, and early reports returned.

* Read at the 88th Annual Meeting of the Vermont State Medical Society.

THE COMPLICATIONS AND SEQUELS OF TYPHOID FEVER.*

By D. L. Burnett, M. D., South Royalton.

In considering a serious case of any disease, we are frequently reminded of the old saying that, if the case became complicated, it was apt to become very, very complicated, and this aphorism is especially pertinent in the disease under consideration. In fact, with the possible exception of tuberculosis, in no acute disease, perhaps, are so many of the tissues of the economy liable and even apt to become pathologic as in typhoid fever.

In the short time necessarily allowed this paper in this symposium, scarcely more than a partial enumeration can be made of the atypic conditions that may exist. Hemorrhage, ulceration and perforation of the bowels, severe diarrhœas, wild delirium, bronchitis, passive congestion of the pulmonary circulation, retention of the urine, these, and other conditions, may almost be classed as symptoms of the disease. Coming now to the rarer complications and sequelæ, we may well be amazed at their number.

Albumen is found in the urine in nearly all of the severe cases at some time, but a severe nephritis is rather uncommon. Thus Osler reports: In a series of 229 cases admitted at the Johns Hopkins Hospital, albumin was noted in 164 cases, and tube casts in 103 cases, and in 21 of the 229 cases there was a definite nephritis, and 7 of these 21 cases died—5, however, from perforation and 2 from other causes, leaving no deaths directly due to the nephritis, which is rather of an astonishing showing, taking into account the general severity of typhoid and the severity of the complications. Orchitis and cystitis are both rare in connection with typhoid—the latter especially so, except in cases which have been catheterized. Thus in a series of 178 cases, only 3 instances of cystitis occurred, but when cystitis does occur, it is apt to be of a very severe type and to progress to a pyelitis.

Retention of the urine was found in 22 cases out of 178, and it is therefore quite common, and is due in a large proportion of cases to an atonic state of the bladder. Suppression of the urine is somewhat rare except as a terminal symptom.

The dangers to the bones in typhoid are far from being imaginary, and at least two very interesting cases of typhoid suppurative joint affections were reported to this society several years ago.

The nervous system is also very prone to participate in complications and sequelæ of typhoid. A long continuance of the delirium is not rare, and this condition may merge into an acute maniacal insanity as convalescence from the fever is being established.

Aphasia is sometimes a sequence, which is more apt to be found in children, and is usually only temporary in duration and of a functional character. Chorea is frequently aroused by a run of typhoid. Neuritis, either local or general, is not uncommon either complicating or following.

In the report to this society a few years ago by Dr. J. D. Brewster on the epidemic of one hundred and thirty cases which occurred at Windsor, there were seventeen fatal cases, one of which died with erysipelas. In children otitis, with its attendant mastoid troubles, is of frequent occurrence.

In an excellent article on typhoid fever by Dr. E. L. Doubleday, in a series of one hundred and seventy-eight cases I find the following of interest: Bronchitis occurred in nineteen cases; six cases were complicated with phlebitis as follows: two in right femoral, two left femoral, left popliteal, right bronchial. Earliest on eighteenth day; latest on sixty-second day. Abscesses complicated seven cases located as follows: Perineal, ischial, rectal, left hypochondriac two, right axillary, left submaxillary, and right parotid—the latter of which was followed by multiple abscesses. General furuncu-

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losis followed the fever in eight cases; suppurative otitis media in three cases. Three cases were complicated with cystitis, in which the patient had not been catheterized. One case of serious bleeding from the uterus and vaginal mucous membrane occurred. Retention of urine was found in twenty-two cases.

Mania, meningitis, tonsilitis, acute parenchymateous nephritis, acute rheumatism, persistent vomiting, persistent nausea, each complicated one case, and all recovered. Catarrhal pneumonia, purulent bronchitis, abscess of the lung and perforation, each occurred in one case, and all died. Tuberculosis followed in two cases out of the one hundred and seventy-eight and in both was fatal.

In a case reported at the last meeting of the American Medical Association, in a child twenty-one months old occurred the very rare complication of multiple gangrene, which began as a peculiar eruption on the back, neck and extremities. The eruption was first papular and very soon became pustular. Shortly thereafter areas of gangrene developed. Cultures from these areas showed the presence of staphylococcus pyogenes aureus. The pathological report was summed up as follows: "The whole eruption appears to be a multiple embolic process in the vascular system of the upper corium leading to gangrene of the type called infectious multiple gangrene." As a further item of interest the autopsy showed a cholangitis(inflammation of the bile passages) and an adenoma of the liver.

TREATMENT OF TYPHOID FEVER.*

By J. N. Jenne, M. D., St. Albans.

Mr. President and Gentlemen of the Vermont State Medical Association:—

We possess no specific cure for typhoid fever. What is true with respect to most diseases for which we possess no specific treatment is also true of typhoid fever. The methods of treatment are many and the remedies legion. Within the time limitations of this occasion, it would be invidious for one to attempt more than the briefest outline of the treatment of the disease under consideration, if it were wise to attempt even this. I deem it more profitable rather to devote myself to the attempt of a brief resume of the more important therapeutic measures of modern medicine and to a discussion and comparison of the results attained by them. It is convenient to retain for this purpose the familiar subdivisions of the subject of treatment.

Under the head of prophylaxis, we now include measures other than those having relation to the subject actually ill of typhoid fever, recognized as the source of a contagium capable of dissemination and infecting of entire communities, and of the avenues of its transmission. It has a newer meaning in the light of the experience of the past few years in the direction of immunization and inoculation with culture of the bacillus typhosus. I shall speak more in detail of the experiments that have been conducted along these lines and the results that have been obtained thereby a little later, returning for the present to refer briefly to one or two points having reference to the older measures of prophylaxis. It would appear that our attention has been too closely centered and our efforts almost solely directed to the safe disposal of the intestinal excreta, under the belief that therein resided nearly all the dangers of outside infection; but in the light of more recent bacteriological investigations, we are taught that while this may be the chief source of infection of attendants upon the sick, directly, and of food, water and other ingesta, indirectly, in the earlier stages of the disease, it is not the sole source of danger; that the urine, particularly in the latter stages of the disease, is not only a possible but a very probable source of infection, it having been demonstrated that the typhoid bacillus lingers even for some months in this secretion, particularly in those cases where a more or less severe cystitis has been kindled up during the course of

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the disease. They linger here, perhaps long after convalescence has been established, while similar experiments demonstrate that in the greater proportion of cases they disappear from the alvine evacuation, or are very materially diminished in number even before defervescence is established. The saliva, vomitus, and possibly other secretions, harbor these organisms. This being true, the same painstaking care should be exercised in their disinfection, even destruction of the urinary and buccal secretions throughout convalescence, as has been observed in the matter of the intestinal dejecta during the continuance of febrile action, lest the results of all our painstaking care throughout the long illness be rendered futile by carelessness during the last few days of the illness.

One of the more recently recognized vehicles of transportation or transmission of the infectious material of typhoid fever, and one which has received a good deal of attention of late, is the common house fly. It is referred to particularly by Drs. Reed and Vaughn in their report submitted to the Surgeon General of their investigations of the nature and causes of the diseases prevailing in our camps during the Spanish war. It is also referred to by others. From a careful study of the large number of cases of typhoid fever coming under the writer's observation during the Spanish war in the field at Chickamauga and at Fortress Monroe, Va., the conclusion was reached that this was, without doubt, a very fruitful means of conveying infection from the sick wards and from infected soil to food and drink, and doubtless in this fact is found the explanation of many sporadic cases of the disease occurring in both private and hospital practice. This gives an added emphasis to the necessity for the exercise of the greatest care in the disposal of infectious material. Hare expresses the belief that "if the details connected with this process were to be carried out with a rigor proportionate to the real importance of the matter, typhoid fever could be practically stamped out in the course of a single decade."

Entirely apart from considerations relating to the disposal or destruction of the infectious material having its origin in a case of typhoid fever, and in recognition of the practical difficulties to be overcome in its total eradication, prevention of the spread by immunizing inoculations of anti-typhoid serum has received a good deal of attention during the past two or three years, rather more, it would appear at the hands of the English physician than by his American conferees. Dr. A. E. Wright, of the British army, has furnished us with the results of his experiments and observations upon preventive inoculations as practiced under his direction in the British army in the field in South Africa. While an obvious typographical error in the text of the report at hand renders it impossible for me to furnish you with specific data showing the results as to the value of preventive inoculations in all of the cases under observation, the report shows that in the garrison at Ladysmith, of 12,234 persons, 10,529 were not inoculated; 1,705 were inoculated. Among the former, there occurred 1,489 cases of typhoid fever, a proportion of 1 to 7.07, while the latter—the inoculated—only 35 suffered of typhoid fever subsequently, or a proportion of 1 to 48.7. The mortality among the former mentioned class was 1 to every 4.52 of those attacked, while in the latter class the proportion was 1 to every 4.4, giving the final result, among a total living as nearly as possible under precisely the same conditions, except in the fact of one class having received the preventive inoculation while the other had not, of a mortality from typhoid fever in the former seven times greater than in the latter.

Dr. Fullerton gives the results of his observations in a tabulated account of its use upon the inmates, patients and attendants, of an asylum, while the number of trials made was altogether insufficient to furnish a safe basis for judgment; nevertheless, so far as they go, they are entirely favorable to the preventive inoculations.

Dr. R. W. Marsden contributes an article and reports the results of the anti-toxin vaccine

in the Monsell hospital. The number of patients experimented upon is small in this instance, and I am entirely aware that such results may be very misleading; nevertheless, it contributes its mite, and this too in favor of the anti-typhoid vaccine.

Osborne reports in the Lancet of April 21, 1901, that at Modder River the preventive anti-typhoid inoculations diminished the morbidity among his troops thirty-three and one-third per cent.

While it may be stated with frankness that these results do not amount to an absolute demonstration of the value of anti-typhoid vaccination as a means of immunization from typhoid fever, or as demonstrating in any way that it materially diminishes the virulence of a subsequent attack, they warrant the belief that very much may yet come from the labors of these men.

GENERAL TREATMENT.

I cannot refrain in passing from referring to the importance of good nursing to the successful management of a case of typhoid fever. Fully conversant with the value of such aid to the physician, I am not unmindful of the difficulties of securing it in the country, and even in our larger towns, in perhaps a great majority of cases, through consideration of cost, but do we avail ourselves of this important adjunct as often as we might? The employment of a nurse by a family in instances of grave disease even is a matter of education and habit, and once introduced, the practice is rarely discarded. The comfort and safety of the patient is greatly enhanced by the presence in the sick room of an alert and trained person, to say nothing of the comfort of the physician. A light, airy, cheerful, but quiet room, a good bed and all appliances for regulating ventilation and temperature are matters of no small account. I shall not weary you with further comment upon them. With respect to diet, however, it is interesting to observe that with many physicians there is a marked change of conviction with respect to both the quantity and quality of food that may with propriety be allowed during the active continuance of typhoid fever. The practice is general that solid food should be rigorously excluded from the dietary of the fever subject, even in cases of moderate severity. There is reason for belief that this dogma may be reviewed and with a fair prospect of its being revised. R. W. Marsden, in the Lancet for January, 1900, while insisting upon the necessity for the promulgation by the physician and rigorous observance by the patient of definite rules of feeding, reports two hundred cases, of which one hundred and fifty-one received solid food prior to the date of defervescence of the fever; the balance, on that date or subsequent to it. The dietary in these cases included bread and milk, custard, fish with mashed potatoes, chicken, bread and butter and minced meat. In the severe cases, peptonized milk and the meat juices were continued well into the "period of convalescence." A slight exacerbation of temperature was not by him regarded as a sufficient cause for the withdrawal of solid foods, unless it was very obvious that it was producing some intestinal or other irritation. He advised, however, in no instance, the forcing of the patient to take solid food when there was complete anorexia, but he found no justification for the resisting of the craving for food in the manner at present in vogue.

Geo. W. Morehouse (Philadelphia Medical Journal, January 13, 1900), reports results of the dietary in fifty-seven cases of typhoid fever in the Lakeside hospital, thirty-five of whom were allowed well cooked rice, soft boiled or poached eggs on soft toast, macaroni, blanc mange, thickened soups, crackers and milk, scraped beef and minced chicken. This diet was allowed in the mild cases, even if relapses occurred, if with accession of temperature the appetite remained good. It is to be noted in this report that of the five deaths, none were among the number who took solid food, and so far as could be discerned from the report, re-

lapses were not more frequent among the number who received solid food than of those who did not. It is a fact of importance to note that only the milder cases of the disease received the solid food, and it is from the severer ones that the greater rate of mortality is to be expected. The advantages derived from the larger dietary are stated to be "more rapid recovery, diminished risk of surreptitious feeding, with possibly harmful substances, lessened tendency to bolt food, and finally, diminished tendency to asthenic complications."

Recalling the opening words of this paper, that "we possess no specific cure for typhoid fever," it is not surprising, if it is true, that there have been many specifics suggested, but they each and all have been found wanting. Many of them have been wholly discarded as worthless, some even producing great harm.

Now, it may be stated as a general proposition that all cases of typhoid fever are treated by one of five methods above mentioned, or some modification or combination of it with the others.

First, the expectant; second, the antiseptic; third, the eliminative; fourth, the "Brand" method or hydrotherapeutic method; fifth, the antipyretic method. The first method recommends itself easily when the elevation of the temperature is moderate, perhaps not exceeding 102, and when there are few or no gastro-intestinal or nervous symptoms.

The antiseptic method is based upon the knowledge of the bacillary origin of the disease and upon the belief that these agents are destructive to the specific organism in the intestinal canal. This belief is scarcely borne out by experience. Profs. Osler and Anders give expression to the opinion that "typhoid fever is no more primarily a disease of the intestinal canal than is smallpox a disease of the skin," or "lobar pneumonia solely a disease of the lungs." We are then to look upon the lesion of the intestinal canal as the expression of a general systematic infection, "one accessory after the fact," if we borrow a legal phrase, and antiseptics whose field of activity is confined to the intestinal tract can in no sense then be regarded as a specific.

That we are in possession of an agent which has the power of destroying Eberth's bacillus in the living body, lacks confirmation. The benefit, if any, which accrues from the use of these agents is rather to be ascribed to their substitutive action for bile and hydrochloric acid, the normal inhibitors of putrefaction in the gastro-intestinal tract, rather than to any power which they may have been supposed to possess of diminishing the production of typhotoxin available for absorption into the circulation. "It is not likely," says Osler, "that the typhoid bacillus multiply and develop their poison to any extent in the intestinal contents."

Time will not allow more than the enumeration of the more important agents belonging to this class. Salol perhaps occupies the most conspicuous position; napthol, benzo-napthol, chlorine, phenol, and guaicol carbonate, each has its advocates and a later comer is copper arsenite, the latter given in one one-hundredth grain doses at intervals of three hours. It is said to have a remarkable controlling influence over the character of the fever and its continuance.

The eliminative method has its origin somewhat in the faulty belief that the pathogenic organism, Eberth's bacillus, takes up its residence and evolves its toxins in the intestinal canal, from which it is absorbed. Eliminative measures effect its hasty expulsion, together with its toxin, from this culture bed before absorption can take place. They are, however, in their practical application a little more far-reaching and remote in their effects, since other emunctories than the intestine and its contained glands are involved in their scope of action. The kidneys and skin are also included, and furthermore, some of the more highly esteemed and the most effective of this class exercise a decided effect upon both the biliary and gastric secretions to increase them, thus supplying in increased quantities the normal disinfectant

agent of the intestinal canal, hostile to all forms of bacterial life and their products, some of which under normal conditions are harmless, but which under proper conditions, specifically the one under consideration, may take on virulent properties.

Calomel has long enjoyed the confidence of the profession in this respect, after which come the salines. Time forbids the entering into a discussion of this matter further. I close what I have to say with respect to the treatment of typhoid fever by eliminants with the reiteration of the statement made under the head of the antiseptic method, that the beneficent effects which follow the use of this class of remedies accrue probably from the expulsion from the intestinal canal of other pathogenic organisms and their toxins rather than the bacillus of Eberth.

This method is quite generally practiced in connection with some of the others in their modifications.

BRAND, OR THE HYDROTHERAPEUTIC METHOD.

The so-called Brand's method was first employed in 1785, in the British navy, by Dr. Curry, and renewed interest was excited in 1861, when Brand's systematic treatise appeared.

Dr. J. C. Wilson reports the systematic use of the baths in the German hospital in Philadelphia according to the Brand method and to the exclusion of the antipyretic agents, and states that, in theory, the object sought is to hasten the elimination of the toxins from the body as speedily as possible and the avoidance of the introduction into the blood of toxinic agents like the coal tar derivates and other antipyretics. The leading advocates of this method of treatment concur in the view that the antipyretic effect of baths is not the effect primarily sought, but rather the eliminative effect, and comment upon the very appreciable increase of the urinary secretion observed under their use, carrying with it in vastly increased quantities the specific organism of typhoid fever. Without doubt, the Brand method of treatment of typhoid fever is more generally practiced than any other method now known, and from the vast array of statistical matter at hand, the conclusion is warranted that it possesses merits possessed by no other system. Admitting that there are many practical difficulties to be overcome in its execution, particularly in private practice and among the poor, nevertheless the superior advantage which it possesses over and above sponging or any other of the methods of hydrotherapeutics warrants the necessary cost of a portable bath tub, and the increased labor and trouble.

ANTIPYRETIC METHOD.

Dreschfield says that "a certain amount of pyrexia is an essential element in fever and is looked upon by many persons as beneficial. It probably does interfere somewhat with the further growth, development and action of the typhoid bacillus and its products, and it is said to increase the resistance of the organism." It is, however, on the other hand, to be kept constantly in mind that the baneful effects of high temperature upon the central nervous system and upon the other organs is not without its grave dangers. It has not been clearly demonstrated just how much of this disturbance is to be ascribed to high temperature per se, and how much to the direct irritant effect of the specific cause of temperature, acting directly upon the tissues and cells of the nervous and other systems. There are those who, with good cause, contend that many of the graver disturbances of the nervous system occur in the cases not characterized by great elevation of temperature, but all are agreed that high temperature constitutes a specific cause for active interference on the part of the physician.

While it is conceded that this may be the case,it is not generally admitted that it is a matter of indifference how the reduction of temperature is accomplished. Assent is given by most authorities to the proposition that the methods which reduce pyrexia by increasing heat radiation are greatly to be preferred to

those which accomplish this result through their action upon the thermogenic centers of the medulla, or by diminishing heat production.

It is conceded that of all the means known to the profession for the reducing of febrile temperature, none possess the advantages of certainty and promptitude of action in all cases and with freedom from dangers possessed by the cold bath. From a careful survey of the tabulated results of the Brand method of treatment of typhoid fever, the conclusion is irresistible that no means or methods have been suggested which have so favorably influenced the mortality rate as it has done.

From the assembling of the reported results of this treatment in an enormous number of cases, and these cases in the hands of many observers, and under all conditions and with all surroundings, in private and in hospital practice, from which alone may trustworthy conclusions be drawn, it appears that the mortality rate has been reduced from approximately seventeen per cent to something like nine per cent. Osler states that by this means the mortality from typhoid fever has been reduced five to seven per cent.

That this marvelous good comes solely from and by reason of the direct abstraction from the surface of the body, of heat, is hardly conceded by many competent observers. It is contended by its advocates that it represents rather, or is accomplished through, the antipyretic, diluent, antiseptic, and eliminative influence. Osler says in respect to this: "Two advantages are claimed for hydrotherapeutics in typhoid fever, a mitigation of the general symptoms of the disease and the reduction of the mortality," and adds that "the beneficial action is not so much special and antipyretic as general tonic and roborant."

The advantages claimed for the hydrotherapeutic method for the reduction of temperature were, that the mortality is thereby lessened; that the fever commonly runs a less protracted course, that there are fewer and less grave symptoms of disturbance of the nervous, circulatory and digestive systems.

With respect to the use of the other antipyretic agents, such as the coal tar derivates, the results of my inquiries are, that there is a fair unanimity of opinion that their use is generally inimical to the best interests of the case.

The observation from day to day of the reports of "sick and wounded" at Chickamauga National Park during the summer of 1898, and from a personal observation of many of the cases there, treated by the combined hydrotherapeutic and antiseptic methods preceded by a preliminary purge with calomel, and also from the reports of the Surgeon General of the Army of the Third Corps, covering a period of about eight months, and over three thousand cases, I am satisfied that no method exclusively fulfills all the requirements of the situation, but that the cold bath as an antipyretic and eliminant, with a judicious selection of intestinal antiseptic, and generally with a preliminary purging at the outset of the disease, all judiciously selected and adjusted to the requirements and the indications of the case in hand, constitute the strongest safeguarding of the best interests of the patient that is in the possession of the physician.

Finally, in relation to that grave complication—intestinal perforation—attention is directed to the difficulties of diagnosis at a stage when surgical interference promises greatest hope of success, and the remarkable fact that text books on this subject are apt to mislead one on this point, still insisting as they do that the onset of perforation is characterized by a sudden abdominal pain and general collapse, contrary to the facts, symptoms rather to be ascribed to the onset of peritonitis from perforation than from the perforation itself.

Interest attaches to the reports of leucocytic counts as to its value in the diagnosis of intes-

tinal perforation, and while the observations are yet too few in number, and the conditions which may possibly vitiate the results obtained from them are too imperfectly understood, it promises to be of value with the accumulation of knowledge respecting it. It seems fairly definitely settled that there is a rapid rise in number immediately preceding and following perforation. It seems necessary, however, that a previous count should have been made and this at frequent intervals, in order that the personal equation for that particular patient may have been determined for a comparison.

When it is recalled that of one hundred patients who die of typhoid fever thirty succumb from intestinal perforation, and of this number thirty per cent may be saved by timely operation, taken together with the well-known difficulties of making a definite diagnosis of this lesion at a sufficiently early date to render surgical interference of any avail, we find sufficient cause for the closest observation of the patient by an acute, alert and trained nurse who has been especially instructed as to the symptoms of perforation, by the attending physician, and for the latter to hold himself in a constant state of preparedness for immediate action, if the symptoms of this grave complication arise.

PUERPERAL SEPTICEMIA AND THE ABUSE OF THE CURETTE.

By H. Plympton, M. D., Brooklyn, N. Y.

To attempt to break up an old established custom in any line of life is at best, a thankless job, and one likely to call down harsh criticism upon the head of the daring iconoclast.

To attempt to uproot old prejudices existing in favor of a certain line of practice in surgery, and diametrically oppose such practice, is to invite from some, adverse criticism of the harshest kind. The only recompense for this is a logical refutation of, or concurrence in the argument advanced, on the part of other members of the profession.

This latter is what I hope for, and if I provoke a discussion or start a line of thought in the minds of half of the readers of this article, I shall have achieved all I started out to do.

Curetting the uterus to remove fragments of after-birth or other debris has been taught in our medical schools from time immemorial, and it is firmly fixed in the receptive and retentive mind of every medical student that the first move following any such abnormal uterine condition, is to cleanse the uterus by means of the curette.

That the organ should be thoroughly and aseptically cleansed, admits of no argument, but that the work should be done with the curette, I deny most emphatically.

The majority of cases of death following the decomposition of foetus or placenta in utero, are caused by the use of the curette, and I hold that septicemia may be avoided if a more rational procedure be resorted to.

The condition of the uterus containing septic matter is one of great congestion; the thickened walls being coated internally and over the os with a thick, brown, tenacious mucus.

The congestion is active, and therefore the more dangerous in the event of the admission of septic matter into the circulation.

If the curette is used, denuding the walls of their protective covering, an immediate vaccination takes place with a septic virus, septicemia following in an incredibly short space of time (chemical metamorphosis is marvelously rapid in the circulatory system) and death quickly ensues.

If without using the curette, we can remove the septic matter from the uterus without disturbing the mucus covering, and enable the uterus of itself to expel the coating, we shall have taken a long step forward in the treatment of this class of uterine cases.

The uterus, by reason of its congestion may be made to perform a self-cleansing act by exciting the exudation of the serum of the blood into its cavity, thereby washing itself out, and expelling all septic matter instead of absorbing it.

This process of exosmosis is induced by a properly combined alkaline solution at a temperature above 100° and a strict avoidance of Bi-Chloride, Carbolic Acid, Formaldehyde, or any antiseptic of an acid reaction or astringent nature, which would coagulate the fibrine and albumen of the blood.

My method of procedure is as follows:

First: The gentle removal of whatever fragments are lying in the uterine cavity, by means of forceps, care being taken not to tear from the walls any adherent piece.

Second: The gentle flushing of the uterine cavity with the alkaline solution (110°), the reservoir containing the fiuid being not more than two feet above the level of the hips.

If the flushing could be continuously administered for a few hours (say two or three), the conditions would be more speedily reduced to normal, but the discomfort of the position of the patient (on a douche pan) prevents this, and a flushing once every two hours with one quart of solution is about the limit of treatment.

For flushing the uterus, I use a small dilating uterine douche, and as there is plenty of room for the escape of fluid and fragments, there is no danger of fallopian colic or salpingitis.

The first flushing is frequently followed by contractile pains and expulsion of any previously adherent pieces, together with much of the mucus.

A tablet of Ext. Cannadis Indica, gr. ¼
Ext. Ergotin, gr. ½
every hour till desired effect is produced will contract uterus and alleviate pain.

The bowels should be moved freely, both by enema and catharsis.

During the interval between douches, the patient should be kept on her back with the hips sufficiently raised to permit the retention in the vagina of as much of the alkaline solution as it will hold.

The rapidity with which this treatment will reduce temperature, relieve pain, stop vomiting and remove offensive odor is marvelous to one who has not tried it. Sometimes two flushings are sufficient to cleanse the uterus thoroughly; vaginal douches being all that are needed subsequently to complete the work.

Uterine congestion is speedily relieved, and the uterine discharge changes from brown, thick bad smelling mucus, to a thin transparent one, accompanied or followed by more or less of a flow of blood.

A reduction in the frequency of the flushings is desirable as soon as a tendency to return to normal conditions begins to be observed, as it frequently will within twenty-four hours. Then simple vaginal douches every three hours with an occasional uterine flushing if symptoms indicate it.

The action of exosmosis (and endosmosis, for there is every reason to believe in the absorption of some of the fluid), is what is desired to relieve the existing congestion, as in a bronchitis, pneumonia, congestion of kidney, congestion of any mucous membrane, etc., and is the most rational means of restoring a normal condition.

I do not wish to be understood as decrying the use of that most valuable instrument, the curette, but only the abuse of it to wit: its employment under such conditions as make it practically a sharp weapon loaded with septic matter, dangerous beyond the poisoned arrow of the Malay, ar the fang of cobra, and utterly opposed to our modern ideas of antisepsis.

No. 2. Macon Street.

THE SENDING OF MEDICO-LEGAL MATERIAL THROUGH THE MAIL WITH PRESENTATION OF A NEW MAILING TUBE.*

Dr. C. S. Scofield, Richford, Vt.

It is well known that a great deal of difficulty is met with by physicians in obtaining a container for medico-legal or bacteriological material which is substantial enough to withstand transportation, and at the same time meet

* Read before the Franklin County Medical Society, September 18, 1902.

the requirements of the law. So I have been endeavoring of late to devise something that would meet all the requirements, and prove neat and aseptic in every particular.

The tube I here present is the result of my efforts in this respect, and has the following advantages:

It is absolutely strong and perfectly tight when closed. It is made of very strong metal and can withstand the most severe usage, and any glass or material contained within is therefore entirely safe. The top screws on with such nicety and fits so closely that it is water and air tight. A rubber cap inside the top also insures this condition. A small ear on both tube and cap, situated some little distance apart, enables the perfect and constant sealing of the whole by a tinned wire passed through, and in turn fastened by a small mass of soft solder, easily done with a lighted match. This insures against molestation in transit, and until the proper destination is reached, which is of vast importance in medico-legal cases. A seal might be used in place of the solder.

The tube has an especial advantage in that it can be easily sterilized. This is of importance to avoid the carrying of infection, which might result from handling or from the collection of the material, and can easily be done with carbolized solutions before leaving the house. It is then in perfect sterile condition, can be wrapped in paper and sent to its destination.

The indestructibility of this tube is a specially economic feature, for it will be found so durable that it can be used over and over again for years. The price is also in its favor for it can be produced at a very low cost. On inquiry I have learned that bicycle pumps of the same material can be made for about five cents each, and these can probably be gotten up for in the vicinity of ten cents apiece for this size, and the price would be in proportion.

The tube meets with every requirement of the United States Postal Laws, and I believe is just the thing that we need to protect ourselves, to obtain the security desired, and prevent any danger to those concerned in its transportation.

In a conversation which I had some time ago with our late lamented Dr. Jo Linsley,—to whose able efforts we owe so much for our present well equipped State Laboratory,—in regard to this matter he stated he knew the present manner of sending specimens was imperfect, but it was the best the committee could devise after examining into the methods used by many of the other states. New Hampshire uses a wooden bottle with screw top, which is open to the same objections as our own.

The State Pathologist of New Hampshire, after examining my tube, stated it met the requirements the best of anything he had seen. Several others prominent in medicine, to whom I have shown it, have expressed themselves as highly pleased with it. For fear I might be infringing on the rights of others, I wrote to a lawyer in Washington who ascertained for me that this tube could be patented, as nothing just like it was to be found in the Patent Office.

In these days when preventive medicine is holding such a prominent place in the treatment of disease, we should exercise every care that we in no way endanger the lives of others,

in our endeavors to arrive at a correct diagnosis. In some localities, bottles of sputa and other specimens are left in drug stores, etc., to be collected by those having this work in charge, for the laboratories where the specimens are to be examined. Unless proper care has been taken to insure thorough sterilization of these bottles and packages, what is to hinder the germs of disease being scattered, thereby endangering the lives of others? If cats and dogs can spread the contagion, why not the receptacles of specimens when not properly treated? Most of the receptacles for carrying specimens are made of wood,which are not durable, can be easily broken, and cannot be thoroughly sterilized and cleansed, as they should be, before sending them through the mails or by express. Then, again, if Uncle Sam will not allow specimens to go through the mails without being sealed up in a metal mailing tube for fear, through some accident, the mails might be contaminated, thereby endangering the lives of those handling them, neither should they be allowed to go by express for the same reason.

Our State Laboratory has been, and is, doing a grand good work, and those having it in charge from the beginning deserve great credit for what they have done, but there is always a chance for improvement, and I believe there is a chance for improvement in the method of sending specimens to the Laboratory, and I sincerely hope that that improvement will be made as soon as possible.

I feel this subject of sending specimens through the mail and by express, is an important one, and should be as near perfection as possible, and I bring this tube before you to-day for the purpose of examination and criticism, and any suggestions as to its improvement will be gladly received and appreciated.

Let us, physicians of Vermont, be the first to adopt a system of sending specimens by mail or express which is thoroughly safe, and free from the objections which the present methods in use are open to.

SPECIAL THERAPEUTIC ARTICLES

HOW TO ASSIST YOUNG GIRLS TO WOMANHOOD.

By Edward C. Hill, M. D., Denver, Col.

The primary establishment and the menopausal cessation of menstruation are the two crucial physical epochs of woman's life. The change from maidenhood to womanhood is one that involves the whole body, and manifests itself alike in the form, the voice and the sexual and nervous phenomena. In an ideal state of perfect health this transition into puberty should be as natural and uneventful as gliding from sleep into consciousness. Owing, however, to the present civilized modes of living, the cerebral development of young girls is fostered and forced to a degree that deprives the remaining tissues and organs of their necessary nutrition, and too often we are called upon to treat delicate girls that are like buds blasted in the blossoming. Many a woman traces back a prolonged existence of semi-invalidism to exposure and lack of care at the early menstrual periods. Tight lacing also predisposes to pelvic disorders by interfering with circulation and exciting uterine displacements. The strain of puberty upon the nervous and blood-forming structures may be too great in a subject hereditarily deficient in vital resistance and adaptability. So we may count among the morbid incidents more or less peculiar to puberty, chlorosis and anemias, general debility, neurasthenia and hysteria, acute pneumonic phthisis, chorea and hebephrenia.

According to Emmet, more than half of all women who have suffered at puberty from menstrual derangements are sterile and delicate in after life. Skene has stated that his observations showed that the vast majority of incurable diseases peculiar to women originate in imperfect development and consequent derangement of function. This development is either primary, during the embryonic stage, or sec-

ondary, at puberty. Defects in the former are irremediable, whereas secondary deviations from the normal standard are both preventable and curable in most instances.

It is important in connection with the subject under consideration to bear in mind the essential reciprocal relations of the reproductive system and the general organization. As Virchow says, all the specific properties of woman's body and all her womanly characteristics, depends upon her ovaries. In other words, a woman is not fully a woman unless her sexual development is natural and complete and in line with a healthy general organization. A beautiful illustration of sexual dimorphism has been furnished by Prof. Max Weber (quoted by Skene), who presented the case of a chaffinch in which the left side of the body had the female coloration and the right side that of the male bird, the two colors being sharply limited at the middle line. The bird was a hermaphrodite with a well-developed ovary on the side of the female plumage, and a testicle on the opposite side. The phenomena of menstruation offer the most palpable evidence of the onset of puberty. The precise nature of this rythmic cycle is overshadowed by a jungle of theories, and, as Millikin well says, we can do no better in the present state of our knowledge than accept menstruation as a habit which has been nailed upon our race by hereditary, and which is for us an ultimate biologic fact.

Normal menstruation in temperate climates generally begins in the fifteenth year. In the tropics it appears much earlier, so that in Mexico one may see a grandmother of only twenty years. Within the Arctic Circle Eskimo girls do not generally arrive at puberty until the eighteenth year. City girls usually have the menstrual flow earlier than do hard working country girls, in whom muscular exercise has the same derivative effect on the pelvic blood supply as too intense devotion to study. The time, amount and character of the menstrual flow vary normally within wide limits. The menstrual cycle for different individuals ranges in perfect health from two to six weeks. The average duration in the temperate zone is about four days. Soaking more than three napkins daily is considered abnormal. Anemic girls, as a rule, tend to menorrhagia; chlorotic ones, to scanty menstruation. Clots are present when the amount of blood is great, or the mucus and fatty acids scanty. A periodic white menstruation, from supersecretion of the uterine glands, is not infrequently noticed in the intervals midway of menstruation.

Menstruation is or should be a perfectly physiologic process. In the virgin disorders of menstruation of whatever nature are nearly always dependent upon the defective nutrition of the reproductive organs, and this in turn upon a blood supply insufficient in quality or in quantity. In the great majority of cases, therefore, our efforts to aid nature in effecting the transformation of the girl into a woman, should be in the line of a happy balance of nutrition between the special female organs and the body as a whole.

Hygienic measures are of the first importance. Fresh air and sunshine are always in order. Exercise is especially indicated for the fat and flabby chlorotic girl, and her diet should be restricted in sugars and starches. The highly active, intellectual girl must rest from her studies and try to become a little lazy. Proper precautions should be taken in regard to reasonable care of the person at the time of the monthly periods. Yet the physician should beware of unduly alarming his little patient, and so bringing about a condition of hypochondriacal valetudinarianism. Simple cleanliness is certain to do no harm, but good. The conservation of the general health and vigor is the chief factor in maintaining safe and easy menstruation.

In spite of hereditary defects, if the physician could have full control of the diet, clothing, hygiene and environments of the little girls in his clientele up to the date of puberty, but little if any medication would be then required. Un-

fortunately, however, the lack of harmonious development in the preadolescent period necessitates considerable medical attention to secure a normal course for the critical metamorphosis of puberty, whose influences, as Dudley remarks, are fundamental, not only in the reproductive organs, but in the entire woman. Actual pain at the menstrual period in the young virgin may be considered always pathologic, and the same is true of menorrhagia or very scanty menstruation. Such abnormalities of function should direct our attention to the state of nutrition especially. The obese, chlorotic girl must take more exercise; the thin, delicate, sensitive girl, more rest. Fresh air and sunshine are needed in every instance. Red meat, eggs and other blood-forming foods should be taken in such quantities as can be well borne. The appetite for wholesome nutriment should be encouraged, if need be, by stomachic stimulants, such as the official elixir of strychnin, pepsin and bismuth. The use of bromides, coal-tar analgesics and diffusible stimulants at the menstrual periods can be regarded only as a temporary makeshift.

The most constant and positive clinical sign of imperfect puberty is deficiency of the blood in red corpuscles and hemoglobin, the chlorotic type being perhaps more common than the simple anemic in relation to menstrual disorders. Hemic defects and malnutrition act reciprocally as cause and effect. The oxidizing life of the blood is in the iron it contains, with about one-twentieth as much manganese. The total iron of the adult body amounts to but 2.5 or 3.5 grams, chiefly in the form of hemoglobin. The normal daily content of iron in the food of an average diet, is, according to Stockman, from five to ten milligrams. When absorbed, as in health, this food-iron replaces the metal continually lost by disintegration of blood corpuscles and excretion. The round of iron in the body seems to be from the duodenum to the mesenteric glands, thence to the thoracic duct, the general blood current and the spleen, from where it passes to the liver to be synthetized into hemoglobin for the red cells, on the breaking down of which the dissociated iron is eliminated by way of the large intestine.

The use of iron in anemita and chlorotic conditions is, of course, a cardinal principle in therapeutics. In girls becoming women to supply a deficiency of erythrocytes or hemoglobin, one might infer at first thought that the best method would be to administer hemoglobin, that is, blood in some form. Chemistry proves, however, that when hemoglobin is taken into the stomach it is changed by the acid there to hematin (causing the coffee-ground color of small gastric hemorrhages), which, according to Cloetta, passes down the alimentary tract without being absorbed.

Most authorities conclude that inorganic compounds of iron in order to be absorbed must first be changed to albuminates by combining with food matters. All albuminous substances are hydrolyzed to peptons before they are capable of absorption. Hence it follows that a peptonate of iron is the preparation most likely to be readily and completely absorbed and assimilated. The best remedy of this composition, I think, is Gude's Pepto-Mangan, which I have used for the past ten years with great satisfaction, particularly in the hemic and nutritive disorders of female puberty.

This neutral solution contains three grains of iron and one grain of manganese in each tablespoonful. The latter ingredient is doubtless to be credited with a large part of the nearly specific effect of the remedy in functional menstrual derangements. The preparation is pleasant to the eye, agreeable to the palate and has the great advantage over inorganic iron compounds of not corroding the teeth, deranging digestion nor inducing constipation. According to the nature and severity of the case, the dose varies from a teaspoonful to a tablespoonful. It is well taken in milk or sherry just after meals.

In conclusion the writer would like to emphasize the peculiar physiologic efficacy of Pepto-Mangan (Gude) in aiding young girls

to a normal womanhood, when the crisis of puberty is complicated with any defect in blood-making and nutrition. Its action is prompt and pleasant, and the clinical benefits derived from its use are readily apparent to all concerned. In curable cases it is as nearly specific as any combination of drugs could be.

THE EIGHTY-NINTH ANNUAL MEETING OF THE VERMONT STATE MED. SOCIETY.

The 89th Annual Meeting of the Vermont State Medical Society will be held at Burlington, October 9th and 10th. A large attendance is assured as this year's meeting is to be one of the most important in the history of the Society. An interesting program has been arranged and the topics for discussion have been carefully chosen. Following are the officers and the program:

OFFICERS.

President—J. B. Wheeler, Burlington.
Vice-President—M. F. McGuire, Montpelier.
Secretary—George H. Gorham, Bellows Falls.
Acting Treasurer—Geo. H. Gorham, Bellows Falls.
Auditor—H. R. Watkins, Burlington.

COMMITTEES.

Executive—J. B. Wheeler, Burlington; George H. Gorham, Bellows Falls; M. C. Twitchell, Burlington.
Publication—George H. Gorham, Bellows Falls; G. R. Anderson, Brattleboro; E. R. Campbell, Bellows Falls.
Necrology—M. H. Eddy, Middlebury; S. E. Darling, Hardwick; C. S. Scofield, Richford.
Legislation—W. N. Platt, Shoreham, A. B. Bisbee, Montpelier; D. C. Hawley, Burlington.
License Censors—Henry Janes, Waterbury; W. H. Vincent, Orwell; S. W. Hammond, Rutland.
Arrangements—D. C. Hawley, Burlington.
H. C. Tinkham, Burlington; C. A. Pease, Burlington
Anniversary Chairman—W. N. Bryant, Ludlow.

ORDER OF EXERCISES.

FIRST DAY, THURSDAY OCT. 9.

Morning Session, 10 o'clock.

1. Called to order by the president, J. B. Wheeler, Burlington.
2. Prayer.
3. Reading of Record by the Secretary, George H. Gorham.
4. On the adoption of the proposed Constitution.
5. Reports of Officers and Delegates.
   Treasurer—J W. Avery.
   Acting Treasurer—George H. Gorham.
   Secretary—George H. Gorham.
   Bd. of License Censors, Chairman—Henry Janes.
   Necrology, Chairman—M. H. Eddy.
   Arrangements, Chairman—D. C. Hawley.
   Legislation, Chairman—W. N. Platt.
   Delegates to the Medical Department of the Unlversity of Vermont, Dartmouth Medical College and to the different Societies.
6. Consideration of Reports of the various Officers, and Delegates.
7. Obituary of E. S. Hooker, M. D., George S. Bidwell, Waterbury.
8. Some therapeutic considerations, Edward R. Clarke, Castleton.
   Discussion, H. L. Manchester, Pawlet.
9. Sanitary water analysis and what can be learned therefrom. D. D. Grout, Waterbury.
   Discussion, T. R. Stiles, St. Johnsbury.

Afternoon Session, 2 o'clock.

1. Called to order.
2. Introduction of Delegates from other Societies.
3. Vice-President's Annual Address. Puerperal Septicemia. M. F. McGuire, Montpelier.
   Discussion, J. S. Hill, Bellows Falls.
4. Address on Gynecology. A. Lapthorn Smith, Montreal.
   Discussion, H. C. Tinkham, Burlington.
5. Diphtheria with special reference to its complications and treatment. J. H. Blodgett, Saxton's River.
   Discussion, Stanton Eddy, Middlebury.
6. The Early Diagnosis and treatment of Pulmonary Tuberculosis. H. Edwin Lewis, Burlington.
   Discussion, A. I. Miller, Brattleboro.
7. Should the State care for the consumptive? E. J. Melville, Bakersfield.
   Discussion, W. N. Platt, Shoreham.
8. Adjournment.

Evening Session, 8 o'clock.

President's Annual Address. Subject—Modern Treatment of Prostatic Hypertrophy J. B. Wheeler, Burlington.
Discussion, E. M. Pond, Rutland.

Banquet.

At the close of the evening session the Annual Banquet will be held at the Van Ness House.
W. N. Bryant, Ludlow, Anniversary Chairman.

SECOND DAY, FRIDAY, OCT. 10.

Morning Session, 9 o'clock.

1. Called to order.
2. Report from House of Delegates.
3. Subdural abscess of the Brain in the temporo-sphenoidal lobe, with report of cases. G. C. Beckley, St. Albans.
   Discussion, C. E. Chandler, Montpelier.
4. Occupations in relation to death. R. M. Pelton, Richford.
   Discussion, C. M. Campbell, Rochester.
5. Adiposis dolorosa, H. C. Gordinier, Troy, N. Y.
   Discussion, J. H. Jackson, Barre.
5. Medico-Legal autopsies. M. J. Wiltse, Burlington.
   Discussion, A. B. Bisbee, Montpelier.
6. Cerebal Apoplexy, its causes and treatment. Joe W. Jackson, Barre.
   Discussion, W. W. Berry, Waterbury.

Afternoon Session, 2 o'clock.

1. An interesting case of fracture of the skull. W. W. Genge, Hyde Park.
   Discussion, T. F. Gartland, White River Junction.
2. Urethal Strictures. W. W. Townsend, Rutland.
   Discussion, C. B. Doane, Springfield.
3. Some observations as to the diagnosis of small-pox. C. S. Caverly, Rutland.
   Discussion, H. R. Watkins, Burlington.
4. After forty years with the Neuroses. A. J. Willard, Burlington.
   Discussion, J. M. Clarke, Burlington.
5. Voluntary papers, or reports of cases.
6. Unfinished business.
7. Adjournment.

ANNOUNCEMENTS.

Important. This is, without doubt, the most important meeting in the history of the Society, as the question of Reorganization on the lines laid down by the American Medical Association will be definitely settled at this time.

All of the present members and all those who have joined one of the County Societies are earnestly requested to be present.

The first business before the Society on Thursday morning will be the adoption of the new Constitution which was accepted one year ago. If adopted, all further business of the Society will be conducted according to the new Constitution and By-Laws.

Place of Meeting. The session will be held in the large hall of the Y. M. C. A. building.

Headquarters. Headquarters of the Society will be at the Van Ness House.

Exhibits. Rooms have been reserved in the Y. M. C. A. building for exhibits from the leading Drug Houses, Surgical Instruments Manufacturers and Medical Book Publishers.

Registration. All members and visiting physicians are requested to register their names and address on entering the hall.

Entertainment for Ladies. Entertainment for the ladies will be provided by the Committee of Arrangements and all are cordially invited to attend.

Railroads. Round trip tickets at a fare and one-third will be on sale at all the principal stations on the Rutland, Central Vermont, Montpelier & Wells River and Boston & Maine Railroads.

NEWS, NOTES AND ANNOUNCEMENTS

Caledonia County Doctors Organize.—Some of the doctors of Caledonia County met in St. Johnsbury recently to organize a County Society to affiliate with the State Medical Society. There are forty physicians in the county and the success of such an organization is assured. Officers were elected as follows: President, Dr. L. W. Hubbard, Lyndon; Vice-President, Dr. O. E. Carter, Danville; Secretary, Dr. W. J. Aldrich, St. Johnsbury; Treasurer, Dr. J. M. Gibson, McIndoes Falls; Board of Censors, Dr. S. N. Eastman, Groton, Dr. S. E. Darling, Hardwick, Dr. J. E. Hartshorn, St. Johnsbury. Dr. D. C. Hawley of Burlington, was present to aid in the organization of the society. Adjournment was made until September 30th, when the organization will be completed.—*St. Johnsbury Republican.*

Washington County (Vt.) Medical Society.—The annual meeting of this society was held in Barre, September 9. Dr. Arthur B. Bisbee, Montpelier, was elected president; Dr. Myron L. Chandler, Barre, vice-president; Dr. Orlando G. Stickney, Barre, secretary, and Dr. Charles E. Chandler, Montpelier, treasurer.

Dr. Otto H. Schultze to be Coroner's Physician.—The Supreme Court of the City of New York has issued a peremptory writ of mandamus directing the Municipal Civil Service Commission to certify the name of Dr. Otto H. Schultze for appointment to the position of coroner's physician to succeed Dr. Hamilton Williams who resigned some time since. A similar writ which was applied for in behalf of Dr. Stephen E. Whitman, who was coroner's physician in Richmond Borough until January 1st of this year, was denied by Justice Greenbaum. The Justice held that the appointment of Dr. Whitman had expired with the term of the coroner who made the appointment, and that in placing the name of Dr. Whitman on the preferred Civil Service list, the commission had erred.—*N. Y. Med. Journal.*

The many Vermont friends of Dr. Schultze will learn with pleasure of this decision in his favor. Dr. Schultze is Professor of Pathology in the University of Vermont Medical Department.

RFCENT DEATHS.

Lucretius D. Ross, M. D. Castleton, (Vt.) Medical College, 1857, a prominent member of the Vermont State Medical Society and some-time president of the Rutland County Medical Society, who served during the Civil War as surgeon of the Fourteenth Vermont Volunteer Infantry, died at his home in Poultney, Vt., August 25, after an invalidism of nine years due to paralysis, aged 75.

William B. Wynne, M. D. University of Vermont, Burlington, 1857, who served through the Civil War as assistant surgeon of the Fifty-third Pennsylvania Infantry, was then transferred to the First Division, Second Corps, Army of the Potomac, promoted to surgeon of the Fourteenth Pennsylvania Infantry, and then made surgeon-in-chief of the Middle Military Division, and on the staff of General Custer, and who, after his discharge in 1865, practiced in the oil regions of Pennsylvania, and for the last eighteen years in Phenixville, died at the Phenixville Hospital, August 16, after an illness of a year, aged 70.

George B. Nichols, M. D. Rush Medical College, Chicago, 1883, a prominent member of the Vermont State Medical Society, died at his home in Barre, from Bright's disease, August 25, aged 63.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

H. EDWIN LEWIS, M. D., *Editor.*

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BURLINGTON, VT., September 25, 1902.

EDITORIALS.

VERMONT STATE MEDICAL SOCIETY.—This issue of the VERMONT MEDICAL MONTHLY is issued complimentary to the Vermont State Medical Society and its meeting to be held in Burlington, October 9th and 10th, 1902. The Society is one of the oldest medical organizations in the United States and has always been a source of help and inspiration to the medical men of Vermont. The following is taken from an article in *Hurd's History of the New England States:*

"Vermont has been particularly fortunate in regard to her medical societies. Each of the three schools has its own society, made up of the practitioners who follow its teachings. Each are doing good work, and accomplishing much for their members.

The oldest of these is the Vermont State Medical Society, whose members are from the regular physicians of Vermont. It was incorporated November 6, 1813, through the efforts of several prominent medical men who wished to receive the benefit to be derived from a good, scientific, medical organization. From year to year, since July 7, 1814, the date of the first meeting, it has steadily grown—many, if not all of the prominent, regular practitioners of Vermont being interested in its development and progress. Dr. Ezekiel Porter was the first president, and Dr. Calvin Deming the first secretary. It can truly be said that this society has accomplished a great deal for Vermont medicine. Papers of high, scientific value have been presented at its meetings, notable discussions have taken place, and these have all tended to raise the quality of medicine in general. The various officers are elected annually, with the exception of the secretary, who continues in office from year to year. The meetings for the last eight years have been held annually at such place in Vermont as the society has decided at each preceding meeting. Previous to this the meetings were held semi-annually. This society is recognized all over the country by medical men as a scientific, progressive association of medical workers—men who are trying to raise the standard of the profession and make it more honored and respected as the years go by."

This year's meeting is especially important for the reorganization of the Society on a County Society basis will be consummated, and great hopes are placed on this new plan of bringing a larger number of medical men into the scientific work and atmosphere of the State organization.

The President this year is Dr. John B. Wheeler of Burlington, Vt., Professor of Surgery in the University of Vermont Medical Department. Dr. Wheeler is one of the leading surgeons of Vermont and is well known all over the State for his sterling worth, both as a physician and as a gentleman.

Dr. George H. Gorham of Bellows Falls, is the Secretary, and he has most acceptably filled the difficult place made vacant by the resignation at the last meeting of Dr. D. C. Hawley, who had served as Secretary for fifteen years with conspicuous ability. Dr. Gorham has amply justified the claims and expectations of his many friends.

THE STUDY OF TYPHOID FEVER.—Until quite recently the belief has generally been held by medical men that all possible knowledge

concerning typhoid fever was in our possession. The discovery, however, of the agglutination of bacteria by toxic substances, notably those present in the blood during certain diseases, and the specific application by Widal of this bacterial phenomena to the diagnosis of typhoid fever, has been a distinct and valuable addition to our knowledge, and really marks an epoch in the history of the disease. Especially valuable is the serum test for typhoid fever at this time when we are growing to appreciate the clinical and pathogenic importance of certain members of the colon group in producing enteric symptoms closely simulating those hitherto considered pathognomonic of the typhoid bacillus. Typhoid fever can no longer be considered as a distinct type of disease. Bacteriological study and close clinical observation has demonstrated that the bacillus coli communis can and does under certain conditions produce febrile diseases with enteric symptoms which are almost indistinguishable from typhoid fever and its atypical forms. So also do certain others of the colon group. In such cases the Widal test is exceedingly valuable making possible greater accuracy in diagnosis and prognosis.

An interesting line of thought is suggested by the similar pathogenic action of these different but closely allied groups of bacilli. It is generally accepted that they bear some relation to each other, in fact the more they are studied the more apparent and close such relationship becomes, and it requires no stretch of the imagination to believe that the evolutional tendencies of environal influences may define their pathogenic intensity to a very marked extent. The question would seem to be the old one of the seed and the soil, with the added thought that both factors are open to modification and therefore variation in their adaptability to each other. Much study will be necessary to establish a theory so abstract, but it is certainly justifiable and necessary in view of the great clinical importance of intestinal disorders and their relation to the public health in peace and war. It would seem advisable, moreover, even with our present knowledge, that public water supplies should be interrogated and condemned not alone for the bacillus of Eberth but also for these other micro-organisms which may prove nearly, if not quite, as disastrous to the health of susceptible individuals.

THE TUBERCULOSIS QUESTION IN VERMONT WITH ESPECIAL REFERENCE TO THE NEED OF A STATE SANITARIUM FOR CONSUMPTIVES.—There can be little question that several things are needed in Vermont to successfully carry on our local struggle with tuberculosis. Our State is more prosperous and in a stronger financial condition than ever before; our people were never more independent nor possessed of better advantages and prospects from a social and an economic standpoint; and our health laws for the prevention of communicable diseases were never more efficient and useful than they are to-day. In fact as a community we have made distinct and wonderful advancement in sanitary matters, and Vermont can well feel proud of what she has done for the future health of her people. But while the machinery of our laws, the vigilance of our officials and the intelligent co-operation of our people are doing so much to prevent disease, we should awake to the fact that there is one weak and neglected point in our struggle with that greatest curse of all diseases, tuberculosis. That one weak point is our method, or rather absence of any method, in controlling or helping those who already victims of the disease. For instance, the reporting of cases of tuberculosis to local or State Boards of Health is a phase of the question which must be attended to at an early date. The following from a recent article expresses the growing sentiment in regard to the matter:

"Compulsory notification of cases of pulmonary tuberculosis has much in its favor and very little except foolish sentiment against it.

The idea is neither to quarantine nor ostracize tubercular patients, nor yet to make their cases public, but to give the health authorities information of infective centres, and thus enable them to directly promulgate well established information concerning sanitary and hygienic precautions serviceable in preventing the spread of tubercular material."

Still another enactment that would commend itself to every intelligent person, is an ordinance against spitting in public buildings and conveyances. Such an act would tend to control the greatest source of danger from every consumptive, and appeal to the esthetic sense of all.

But these things, too, are of the nature of prevention, and while important, still leave one necessary duty in our conflict with tuberculosis. Bishop Hall, one of the noted divines of Vermont, has said in a recent letter relative to the tuberculosis question: "Now that it has been proved that so much can be done in the way both of prevention and of cure, we incur a grave responsibility if we neglect the use of both preventive and remedial measures." It can truly be said that we are neglecting very few preventive measures, but what are we doing as a people or as a State towards providing relief or cure for the consumptives in Vermont who are pecuniarily unable to obtain the best advantages which medical science can give? *Nothing,* and ignoring the fundamental principles of charity, humanity and Christianity, we are letting five hundred men, women and children suffer along for one, two or more years and go down to the grave each year without a single public or organized effort in their behalf!!

Are we shirking the responsibility? It certainly looks so when we observe what other states and countries are doing for their consumptives in the way of sanitaria, and realize that Vermont is doing nothing. Scientific opinion is united in recognizing that the properly equipped and arranged sanitarium offers the surest hope to the consumptive if available early in his disease, and reliable statistics show that sanitaria wherever established are saving from fifty to seventy-five out of every hundred cases of early recognized tuberculosis. Does not this fact impose a duty on every community where tuberculosis exists? Should the question of one or two hundred thousands of dollars in a state as rich and prosperous as Vermont stand in the way of a State Sanitarium for consumptives when we know the urgent need of such an institution, and the experience of our neighbors tells us what it can do? Economy in state expenses is a good slogan, but God pity the man or party who could criticise the expense necessary to establish or maintain so noble and worthy an institution as a State Sanitarium would surely be.

The statement is frequently made that it is never known what a Vermont Legislature will do until adjournment. But we feel that this year's legislature is made up of humane and high minded men who will carefully consider the needs of the tuberculosis situation and do what seems right and proper. And if for any reason a State Sanitarium for consumptives is not a possibility this year we earnestly hope that the legislature will provide for a Tuberculosis Commission to consider the question and report at the next assembly.

Then will the people of Vermont who have empty places in their homes due to tuberculosis or those who know what it is to see dear ones go down in the dread clutches of the "great white plague," feel that the time is not far distant when Vermont will be doing her share toward saving our boys and girls and giving them back to useful, happy lives.

MEDICAL ABSTRACTS.

Treatment of Typhoid Fever in Children.—In the *American Journal of the Medical Sciences* for June, 1902, Hand and Walker tell us that in the Philadelphia Children's Hospital the following plan of treatment is instituted in this class of patients: The rou-

tine elements of treatment in the cases under the authors' care consisted of rest in bed and a liquid diet. Not knowing of any specific for the disease, the treatment was to a certain extent symptomatic. Using the temperature as an indication of the degree of toxemia, an endeavor was made to combat the effects of the poison and to secure its elimination by hydrotheraphy. This was started in the majority of cases as a tub bath, the temperature of the water being 85° F. A cloth wrung out of ice water was put on the child's head and the body immersed in the bath. The duration of the bath was from five to ten minutes, the influence on the temperature and on the pulse being the guide. While in the water the surface of the body was gently rubbed by the hands of the nurses. In a few cases, especially among the younger children, the tub baths were not well borne, and sponging with water of the same or higher temperature was substituted. Sponge baths were adopted at the start in some cases, but they often failed to influence the temperature sufficiently, the tub baths being used later with good effect.

As an added means of elimination they used in about twenty-five of the cases drachm doses of solution of citrate of potash well diluted with water, with the hope also that it would tect the kidneys from the poison as it passed out; of course it is not asserted that the medicine was of any more value than the water, but no deleterious effect was seen.

In those cases with loose movements an attempt was made to lessen the enteritis by giving bismuth salicylate, in doses of three grains every three hours, sometimes combined with the subnitrate; in this they seemed successful. The salicylate was chosen first with the hope that its antiseptic properties might in some degree lessen the activity of the specific germs in the intestinal canal, but from the course of the cases it would appear these hopes were not fulfilled.

Whiskey was given in almost every case. Without entering into a discussion as to the food value of alcohol or how it acts in fever, the authors believe that many of the cases were benefited by it. The doses ranged from thirty drops for the younger children, to one, or in a few cases two, drachms for the older children, every three hours. This was usually given at the same time with milk, but sometimes the dose was divided, half being given before and half after the bath. In no case was it pushed until the odor could be detected on the breath.

Strychnine was occasionally used as a heart tonic, and one or two cases with heavily coated tongues received turpentine in five-drop doses. Children entering before the eighth day of the disease were given divided doses of calomel until a grain had been taken; after this constipation was overcome with the use of enemas.

Liquid diet was continued for ten days after defervesence was completed, the first addition to the diet being usually milk toast.

Convalescence was aided by strychnine and Basham's mixture; if the tongue remained coated it was made to clear by a mixture of bicarbonate of soda and compound infusion of gentian. As soon as each patient was able to sit up he was sent to the country branch of the hospital, where the life out-of-doors in fresh air accomplished complete restoration to health.

Castor Oil in Typhoid Fever.—Dr. C. C. Bass, of Columbia, Miss., reports his experiences in the treatment of typhoid fever with castor oil. He reports eight cases in which diarrhea, delirium, and tympanites were prominent symptoms. All were treated by a dose of castor oil. The author says: "I think any physician will be pretty thoroughly convinced after trying it in one case. Take any case, the severest you may see, and give him a dose of castor oil every morning, and no other medicine whatever. The dose should be large enough to act in four to six hours, and should range from two teaspoonfuls to

two tablespoonfuls, according to the condition of the bowels. Keep an accurate record of the temperature, and you will be convinced. At any time during the course of the fever withdraw the oil, and both you and your patient will be convinced. Float the oil in sweet milk in a hot cup, and there will be no objection to the taste. It is not very objectionable, however, to typhoid patients, as their sense of taste is very dull."—*New York Med. Jour.*

TYPHOID PERFORATION. — McCrae and Mitchell in their paper summarize their experience in the following in *American Medicine:* "1. There have been treated 275 cases. 2. Of these a certain number had unimportant complications, as boils or abscesses, the cultures from which in every instance yielded pyogenic cocci. 3. Periostitis and perichondritis have been seen occasionally, always subsiding without surgical interference. 4. Glandular affections, especially mastitis, occurred, but were not serious. 5. Abscess of the liver occurred once with recovery, the cultures being practically negative. 6. There have been symptoms of cholecystitis in 5 cases, of which 3 subsided without operation, one patient was operated on and recovered, while in one the gall-bladder ruptured and general peritonitis resulting in death followed. 7. Appendicitis was suspected on admission in 3 cases and developed once during the course of typhoid fever. 8. Perforation of the intestine occurred in 8 patients. Of these 7 were operated on with 2 recoveries, a third dying of toxemia after a week. All of these 7 were recognized within nine hours, except 2, in which hemorrhage from the bowel accompanied the perforation. In one case operation was not advised because the patient was evidently *in extremis.* 9. Exploratory laparotomy was done in 2 cases in which no perforation was found. In one the symptoms proved to be due to intestinal hemorrhage; in the other to a low grade of peritonitis. The first patient died; the second recovered. 10. Eleven patients with suspicious abdominal symptoms were not operated upon. Of these, 2 died and the autopsies showed no perforation. The remaining 9 recovered." They do not claim that every case should be operated on or that every suspicious case requires exploratory laparotomy, but emphasize their opinion that in the early recognition of perforation is found the only hope of diminishing the mortality. Hence, every means should be used and in certain cases exploration is justifiable.—*Jour. of A. M. A.*

REDUCING TEMPERATURE IN TYPHOID FEVER.—There are two procedures or expedients by which the temperature may be safely reduced and appreciably controlled.

1. By cool compresses to the abdomen. Fold a common towel in about four folds. Wring it out of cool water, of the temperature of 60 to 80° F.; place it over the abdomen, with a light, dry cloth over it, to protect the bed clothing from dampness. Re-cool the compress every twenty or thirty minutes, and continue its application for about two hours, apply it at whatever time of the day, or night, the fever is the highest; usually in the afternoon, after omitting for an hour or two. It may be reapplied, as many times in twenty-four hours as the rise of temperature seems to demand.

One or two applications daily is generally sufficient. It has the advantage over the wet pack of being easily and quickly applied without disturbing the patient.

No danger of chill, bronchitis, or pneumonia resulting. The cool compress should not exclude the daily tepid sponge bath. It is now well understood that the internal organs are supplied with filaments of the same nerves as supply the integument covering them. The chief lesions of typhoid fever are in the ileum. Cold contracts the blood vessels and diminishes the blood supply. Produce this result on the congested and more or less inflamed mucous membranes of the intestines, and we cannot

fail to add to the comfort of our patients, and promote recovery.

The cold compress to the abdomen is what might properly be termed a scientific remedy. Physiology suggests it, and the well-known pathological lesions call for a remedy of this kind. It may not be a new method, but I am sure its merits have never been advocated or appreciated as they should be. The other procedure for reducing temperature is rectal injections of cold water. About a year ago I saw an article in some medical journal advocating their use. Since then I have used them, but only in few cases, and with the water only slightly cooler than the body temperature.

The cool compresses already mentioned have been sufficient to keep the temperature low, without resorting to other means; however, I direct that the enemas used for clearing the bowels shall be cool, about 70° or 80° F., whenever the temperature is above 101° F. I believe we have in this remedy a valuable aid to our means of reducing elevated temperatures.—*Med. Brief.*

A Notable Improvement in the Therapy of Typhoid Fever.—The recent discovery, by Duval and Bassett, of the presence of the bacillus dysenteriae (Shiga) in forty cases of infantile summer diarrhea, awakens renewed interest in the subject of intestinal antisepsis. But a few months have elapsed since Drs. P. C. Freer and F. G. Novy, of the University of Michigan, demonstrated the enormous germicidal power of benzoyl-acetyl-peroxide, more familiarly known as Acetozone. Although the preliminary reports of these investigators were of necessity based upon results of laboratory experiments, their expectations are already being realized in clinical work, in the treatment of typhoid fever, particularly.

In the City of Chicago, where a large number of cases of typhoid have been reported, Acetozone has been used exclusively in the treatment of about 300 of them. The consensus of opinion is that it causes the temperature to decline earlier than usual in the course of the disease, and it ameliorates the mental and physical condition of the patient, in all probability by controlling the toxemia.

Two Chicago practitioners, I. A. Abt, M. D., and E. Lackner, M. D., have thus far reported (*Therapeutic Gazette,* October, 1902), forty cases of typhoid, in children, treated with Acetozone, with but two deaths, a mortality of 5 per cent. One of the patients that died succumbed to pneumonia and pulmonary edema, the other to great pyrexia on the fifth day. Stupor and tympanites were almost entirely absent in all the cases; the characteristic typhoid fetor of the stools was markedly diminished, and the hemorrhage occurred but twice, and in the same case. The average duration of the febrile period, in 37 cases, after beginning Acetozone treatment, was 13½ days. The drug did not seem to act upon the heart or respiratory apparatus.

Early this year Eugene Wasdin, M. D., of the U. S. Marine Hospital Service, Buffalo, N. Y., reported 27 cases (*American Medicine,* Feb. 8, 1902), of typhoid fever, 24 of which were treated with Acetozone, all of the patients recovering. The writer says: "Its application in typhoid fever has been followed by very happy results; its use has been directed to the destruction of the germ in its primary lung colony and also in its secondary intestinal colony, and it has been used by hypodermoclysis to combat terminal expressions, with the result that in 24 cases the disease has been limited almost entirely to the expression of intoxication from the primary focus, the intestinal symptoms remaining entirely in abeyance, and the disease has been shorn of many of its most disagreeable features."

In a second paper, which appeared in the *Therapeutic Gazette,* for May 15, 1902, the same writer states that his patients were given from 1500 to 2000 Cc. of the aqueous solution of Acetozone daily. The diet was milk diluted with the same solution. The first influence of the drug is observed in the increased secretion of urine. That this is not due wholly to the

ingestion of large quantities of water, necessitated by the use of the saturated solution, is evident from the author's assertion that the same result was observed when Acetozone was administered in capsules. The second influence to which attention is directed is the very pronounced decrease of the odor of the stools, while plate cultures from the dejecta showed comparatively few germs.

The deodorant and diuretic effects of Acetozone were also observed by G. H. Westinghouse, M. D., of Buffalo (*Buffalo Medical Journal,* August, 1902), who used it in seven cases. This observer remarks that with the increased flow of urine "a corresponding reduction of typhoid symptoms followed, and tympanites and delirium disappeared." It should be remarked that the diagnosis in all these cases, as well as in most of those reported by the Chicago physicians, was confirmed by Widal's reaction and Ehrlich's test, and in some a blood-count was resorted to. Westinghouse concludes his paper by saying that "Acetozone, as an intestinal antiseptic, is unequaled by anything I have ever employed. A complete subsidence of all the bowel symptoms followed in every case of typhoid within a few days after beginning its use. The application of the antiseptic consisted, in most cases, in simply allowing the patient to drink the saturated aqueous solution ad libitum; or, in other words, substituting this solution for all other liquids, and urging the patient to partake of it freely when the natural craving was not sufficient to insure the consumption of considerable quantities."

BOOK NOTICES.

THE INTERNATIONAL TEXT-BOOK OF SURGERY.—In two volumes. By American and British Authors. Edited by J. Collins Warren, M. D., LL. D., F. R. C. S. (Hon.), Professor of Surgery, Harvard Medical School; and A. Pearce Gould, M. S., F. R. C. S., of London, England. Second Edition, Thoroughly Revised and Enlarged. Vol. I. General and Operative Surgery. Royal octavo of 965 pages, with 461 illustrations, and 9 full-paged colored lithographic plates. Vol. II. Special or Regional Surgery. Royal octavo of 1122 pages, with 499 illustrations, and 8 full-paged colored lithographic plates. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $5.00 net; Sheep or Half Morocco, $6.00 net.

In planning this work the editors and coworkers have kept constantly in mind the needs of both student and practitioner. The result—a masterly exposition of the art and science of surgery, untrammeled by antiquated traditions. In its realization they have given to medical literature an invaluable text-book, embodying a clear but succinct statement of our present knowledge of surgical pathology, symptomatology, and diagnosis, and such a detailed account of treatment as to form a reliable guide to modern practice. In this new edition the entire book has been carefully revised, and special effort has been made to bring the work down to the present day. The chapters on Military and Naval Surgery have been very scrupulously revised and extensively re-written in the light of the knowledge gained during the recent wars. The articles on the effect upon the human body of the various kinds of bullets, and the results of surgery in the field are based on the latest reports of the surgeons in the field.

The chapter on diseases of the Lymphatic System has been completely re-written and brought up-to-date; and of special interest is the chapter on the Spleen.

The already numerous and beautiful illustrations have been greatly increased, constituting a valuable feature, especially so the seventeen colored lithographic plates. The work is excellent; we know of none to surpass it. It is clear, concise, and up-to-date.

In this day of a rapid progress in all things pertaining to surgery, it behooves every medical man to keep abreast of the times. No work from its arrangement and text is better calculated to enable the busy but painstaking practitioner to keep posted than this beautiful

text-book of surgery. It is an authority and worth its price a hundred fold.

Diseases of the Eye.—A handbook of Ophthalmic Practice for Student and Practitioner, by G. E. de Schwernitz, A. M., M. D., Professor of Ophthalmology in the Jefferson Medical College. Third Edition, thoroughly revised. W. B. Saunders.

This, the third edition of a widely known and used text-book on diseases of the eye, is again before us. It is a worthy successor of previous editions and amply maintains the standard set by its predecessors. Particular attention has been given to the important relations which micro-organisms bear to many ocular disorders. Special paragraphs on the following subjects appear for the first time: Favus of the Eyelids, Blepharo-chalasis, Koch-Weeks' Bacillus Conjunctivitis (Acute Contagious Conjunctivitis), Pneumococcus Conjunctivitis, Diplo-bacillus Conjunctivitis (Subacute Conjunctivitis), Parinaud's Conjunctivitis, Pneumococcus Infection of the Cornea, Mixed (Streptococci, Staphylococci) Infection of the Cornea, Schizomycetal Infection of the Cornea, Oyster Shuckers' Keratitis, Fugacious Periodic Episcleritis, Rontgen Rays for Detecting Foreign Bodies in the Vitreous, Retinitis Striata, Hereditary Optic-nerve Atrophy, Eucain, and Holocain. Certain articles—for example, those on Astigmatism, Acute and Chronic Retro-bulbar Neuritis, Diseases of the Sinuses, Color-blindness and its Detection, and the Treatment of Insufficiencies of the Ocular Muscles, as well as a portion of the chapter on Operations—have been rewritten largely, or at least materially changed. A number of new illustrations have been added, making 255 in all and two chromo-lithographs.

The book is well designed for its purpose and well merits the popularity it has won. It is a valuable handbook and we commend it highly.

NEWER REMEDIES.

Abbott's Saline Laxative.—There has never been a time in all the mutations, advances, and various schools of medicine when the initial necessity of clearing out the bowels before further medication of any ailment was not acknowledged and practiced. It is more so, however, at the present time when microbic mischief and antiseptic microbicide is better understood. But we do not need a drastic cathartic which will leave the bowels semi-paralyzed and so prepared for another microbic evasion. What we need is Abbott's Saline Laxative, which clears out the bowels once or twice and done with it for the time. Even a toothache may be stopped by this laxative if it depends upon foul bowels.

Seemingly Astounding, Yet Usual.—Dr. R. C. Burrow, of Maxon Mill, Ky., gives the following experience:—

Miss L. H. had been confined to her bed for three months, suffering with malarial fever. When I was called, I found fever broken, but patient had hardly strength enough to sit up. As she had never menstruated, her mother thought this, in a great measure, the cause of her trouble. After three months' treatment she was again in fair good health, her menses also appearing, but very painful and scanty. I rested treatment for three months more, hoping that good nourishment and nature would re-establish all functional activity. Her suffering, however, grew worse at each menstruation. I then prescribed Ergoapiol (Smith), one capsule four times a day, beginning three days before the expected period. This treatment gave immediate relief and resulted in regular and perfect menstruation. It is now four months since the administration with Ergoapiol (Smith) has been stopped, and she has had no indication of the previous trouble.

Mrs. C., married, had severe attack of La Grippe last winter. Had not menstruated for the past four months. I prescribed Ergoapiol (Smith), one capsule every three hours. Menses appeared on the third day, and again at the last menstrual period.

The Vermont Medical Monthly

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ORIGINAL ARTICLES

MODERN TREATMENT OF PROSTATIC HYPERTROPHY.

President's Address delivered at the Eighty-ninth Annual Meeting of the Vermont State Medical Society, October 9th, 1902.

By John B. Wheeler, M. D., Burlington, Vt.

It is only very recently that surgeons have undertaken the task of relieving, by operative interference, the misery of that large and unfortunate class of patients who suffer from enlargement of the prostate.

When men now middle-aged were beginning practice, the treatment of prostatic hypertrophy was wholly palliative. No attempt was made to remove the obstruction by any sort of operation on the prostate. The fact that such operations are, in themselves, serious and that the subjects of them are men in the decline of life who often are sufferers from renal, cardiac and arterial disease, has made surgeons reluctant to attempt them. Hence, although the first cauterization of the prostate was done by Bottini, of Italy, in 1872, and the first prostatectomy by Belfield of Chicago in 1885, and although Watson of Boston, in 1888, clearly pointed out in an elaborate and masterly monograph the indications for the different methods of operating on the prostate, and McGill, of Leeds, in the same year, published a series of prostatectomies, it is only within the last few years that these operations have been generally performed. But now that daily increasing experience is showing that operative treatment brings great relief and often perfect cure to a large majority of patients and that in properly selected cases, the mortality is not unduly large, operations upon the hypertrophied prostate are performed frequently and with very satisfactory results.

But this striking innovation has not done away with palliative measures, since in some cases operation is contra-indicated, in others it is refused and even in operative cases careful preparation for the operation is desirable. A clear understanding of the danger of infecting the bladder has made modern palliation quite a different thing from that of thirty years ago. If no cystitis exists and the only trouble is the obstruction to the flow of urine, the occurrence of cystitis is guarded against by careful sterilization of the catheter and its lubricant and by disinfection of the meatus and glans before the catheter is used. If the urine is strongly acid, alkalies and diuretics are given. If a cystitis exists and especially if the urine is foul and ammoniacal, the bladder is irrigated with boracic acid solution and urotropin is given internally. Hot water or hot salt solutions are injected daily into the rectum in order to quiet irritability, diminish congestion and reduce the size of the prostate. A soft catheter, of course, is used to draw the urine.

To turn now to the subject of operative treatment. The operations whose object is to reduce the size of the prostate without actually attacking the organ itself, have not proved wholly successful. The best known of them is castration, first proposed for this purpose by J. W. White of Philadelphia. The great relief which was afforded by this procedure in some of the earliest reported cases, caused it to be employed with much enthusiasm. A more extended trial, however, showed that its mortality was nearly, if not quite, as great as that of prostatectomy; that it was often disappointing as a curative measure and that it was sometimes followed

by mental derangement. Add to these drawbacks the reluctance of many patients to undergo that particular form of mutilation and it is easy to see why castration is rarely done now-a-days for the relief of prostatic hypertrophy. Resection of the *vas deferens* has been proposed as a substitute for castration, with the idea of obtaining the same result by an operation which is less dangerous and to which the patient would more readily consent. Vasectomy, however,has about the same mortality as castration,and gives even less satisfactory results,so that it has fallen into disuse. Ligation of the internal iliac arteries has been done, with the idea of causing a shrinkage of the prostate by depriving it of its blood-supply, but the benefits of this operation are by no means commensurate with its seriousness and it has never been regarded with general favor.

The operations from which the best results are obtained are those which are done upon the prostate itself and these are practically the only ones which are performed at present. They are cauterization of the prostate (Bottini's operation) and removal of the prostate (prostatectomy). A brief description of these proceedings may not be out of place.

Bottini's operation, which bears the name of the Italian surgeon who devised it, consists in burning furrows through the hypertrophied prostate by means of an instrument shaped like a small lithotrite, which is introduced into the bladder through the urethra. The beak of the instrument is then turned downward and guided to its proper position behind the prostate by the surgeon's finger in the rectum, the male blade is heated by a galvanic current and by withdrawing it to the proper distance, a furrow is burned through the prostate. The operation is completed by repeating this proceeding several times with the beak turned in a different direction each time. Thus a number of channels are burned through the prostate through which urine can escape, and it is claimed that subsequent cicatrization shrivels and contracts the organ to such an extent that it no longer offers serious obstruction to the passage of urine.

Prostatectomy may be either supra-pubic or perineal, according to the route by which the prostate is approached. In the supra-pubic operation the bladder is opened just above the pubes, in the prevesical space, the exact condition of the interior ascertained by inspection and touch, the mucous membrane over the prostate incised and the prostate peeled out by the finger introduced through the incision, a manoeuvre sometimes very easy, sometimes quite difficult and generally attended with free hemorrhage. Sometimes the gland cannot readily be separated from its capsule and has to be morcellated with forceps. The bladder is subsequently drained from above by a large rubber tube introduced through the supra-pubic wound and from below either by a catheter passed per urethram and fastened into place, or by another large tube introduced into the bladder by an opening made through the perineum. Perineal prostatectomy is performed through a perineal incision, either transverse or longitudinal, but as large as possible, in order to give a good view of the prostate. After the prostate is reached, its capsule is opened, the gland is drawn down by hooks or volsella forceps, and is enucleated by the finger. Drainage is provided by a rubber tube fastened into the wound.

The comparative merits of these methods of operation are still under discussion. Against Bottini's operation it is urged that it requires a large outlay in the way of battery and special cauterizing instruments as well as special experience in the use of those instruments and that the surgeon cannot tell just what he is doing and is liable to harm the bladder wall and even perforate the rectum with his cautery. This has happened at least once. Nor can he recognize other pathological conditions existing in the bladder. In some cases, too, it is impossible to get the instrument into the bladder. On the other hand, it is a more rapid

operation than prostatectomy and can be done under local anesthesia, two important points where the patients are feeble old men whose hearts and kidneys are more or less diseased. It also avoids the annoyance and discomfort of an external wound, except in some cases where perineal drainage is necessary.

Prostatectomy, by either route, has the advantage of permitting a thorough examination of the bladder and of radically removing the obstructing mass. Ulcers can be treated, calculi and new growths removed and the prostate of course, is eliminated. The disadvantages of the operation are that it requires a general anesthetic, that it takes a longer time than the Bottini and that there is more liability to hemorrhage. The hemorrhage in prostatectomy, however, is easily controlled, but when it follows Bottini's operation, as it occasionally does, a cystotomy has to be done in addition to the original operation.

When the results of Bottini's operation are compared with those of prostatectomy, we find quite a difference of opinion among the best authorities. This is perhaps due partly to the fact that only a short time has elapsed since operations upon the prostate have been generally performed, so that opinion has hardly had a chance to take definite form, and partly to another fact, namely, that in many cases operations seem to have been performed in an indiscriminate way, without regard to the indications afforded by the cases in hand. But whatever the explanation is the difference of opinion is marked. Bangs, for instance, claims a perfect cure in only 60 per cent of his cases of Bottini's operation, while Guiteras, after collecting 763 reported cases, finds a similar result in 82.5 per cent. In a series of 152 prostatectomies, Guiteras found perfect cure reported in 72.5 per cent, while Watson claims "complete restoration of the bladder functions" in 85 per cent of his cases. Watson puts the mortality of prostatectomy at not much less than 8 per cent, Fuller puts it at from 5 per cent to 8 per cent in properly selected cases, while Guiteras' series gives a mortality of 16.4 per cent. Other statistics offer, in some instances, still more confusing discrepancies. Nevertheless, enough light can be reached to show the way toward certain conclusions which may, or may not, present a different appearance as the light grows stronger.

The mortality from Bottini's operation is certainly less than that from prostatectomy. Few operators have been able to obtain a mortality of less than 8 per cent for their prostatectomies, while Bottini's operation is generally credited with a mortality of from 5 per cent to 6 per cent. On the other hand, the results of Bottini's operation are less satisfactory, apart from the mortality rate, than those of prostatectomy. The percentage of complete cures is smaller, and in many cases the operation has to be repeated. This is what might naturally be expected. If the prostatic obstruction is simply a bar across the urethra, a deep furrow burned through it would be likely to give complete relief. But when the obstruction is caused by hypertrophy of the lateral lobes, which occlude the urethra just as a pair of greatly hypertrophied tonsils occlude the pharynx, it is easy to see why the burning of furrows would give less relief than in the other case and would be far less efficacious than the complete removal of the obstructing masses.

These considerations serve as guide in the choice of an operation for a given case. If the obstruction is nothing but the bar above referred to, Bottini's operation may be employed with good hope of satisfactory results. If the patient is very old and feeble or has organic disease elsewhere, Bottini's operation, if any, should be performed because it can be done under local anesthesia and in shorter time and with less shock than prostatectomy. But if the patient's age is not greatly advanced and his heart and kidneys are not seriously diseased, he is a good subject for prostatectomy and if there is a general enlargement of the prostate, this operation offers him a better chance of complete cure than the Bottini does. If these

considerations had occurred to all the operators who have reported cases, it is probable that the published statistics would be less confusing.

If prostatectomy is decided upon, the choice between the supra-pubic and the perineal methods remains to be made. The advantages of the supra-pubic method are, that the operator can see what he is doing and can easily reach the middle lobe of the prostate. Its disadvantages are, that it is inapplicable in a small contracted bladder, that it wounds the fundus as well as the base of the bladder, while the wound at the base is worse than that inflicted in a perineal prostatectomy, and that, in order to secure proper drainage, a catheter must be fastened into the urethra or an opening made through the perineum. Perineal prostatectomy, of course, gives no chance to look into the bladder, and the middle lobe of the prostate is often at an inconvenient distance from the perineum. But it wounds the base of the bladder less than the supra-pubic operation does, and does not wound the fundus at all, ample drainage is provided by the operative incision and the size of the bladder makes no difference. Hemorrhage, also, is less profuse and easier to check than in the supra-pubic operation, while the difficulty in reaching the middle lobe of a very large prostate can be overcome by drawing the prostate down with hooks or retractors. With the technique of to-day, the mortality of the two methods is about the same. To a large extent, the choice is a matter of personal preference, each operator choosing the method with which he is most familiar and in the results of which he has the most confidence. But there is general agreement that the supra-pubic operation is best adapted to cases where the bladder is large and the hypetrophied prostate projects high up, into the bladder, while the perineal is preferable where the bladder is small and contracted and the hypertrophy is mainly in the direction of the rectum.

The contra-indications to operation are the same which obtain in reference to other operations, namely, well-marked disease of the heart, arteries or kidneys. When these structures are badly diseased, operative interference is likely to result in speedy death. As Bottini's operation can be done under local anesthesia, this statement does not apply to it so forcibly as to prostatectomy, which subjects the diseased organs to the shock of a general anesthetic. Age, in itself, is not a contra-indication to prostatic operations. Many successful prostatectomies are reported in men over eighty years of age, who had no disease of the circulatory system and whose kidneys were sound. Although cystitis increases the danger of sepsis, it is an indication for, rather than a contra-indication to operation, since operation cures it by draining the bladder.

While good authorities differ as to the best method of operating on the hypertrophied prostate, all agree that operative treatment will result in complete cure of a large majority (70 per cent to 85 per cent) of cases and that the dangers of operation do not justify the apprehension with which it is generally regarded. Of course, it is not likely that a very low mortality can ever be obtained. So many prostatics have organic diseases in addition to the weakness of age and so many of them, either from their own timidity or by the advice of their physicians, refuse operation until their condition has become desperate, that any considerable number of operations upon the prostate must show a very appreciable mortality. This, as has already been stated, has been brought down to about 8 per cent by improved technique and will be still further reduced when the importance of operating early, before the bladder and kidneys have become seriously affected, is thoroughly appreciated. The risk of operation in a clean, normal-sized bladder, with the kidneys in good condition, is not great. If matters have been allowed to go on until a long-standing purulent cystitis has contracted the bladder and converted it practically into an abscess cavity and the kidneys have undergone secondary changes, the patient is likely to die of sepsis from his infected bladder or of uremia

from his diseased kidneys. If he escapes these dangers, his contracted bladder, which can never hold the normal amount of urine, will render a perfect cure of all his symptoms impossible. The time to operate for prostatic hypertrophy is well stated by Thorndike to be just as soon as palliative treatment, properly carried out, fails to relieve the symptoms. If operation is reserved as a last resort, it becomes, like all other "last resort" operations, a desperate and dangerous measure. Surgery has always suffered from the tendency to make it a last resort, and this is at least as true of prostatic operations as of any other surgical procedures. When done early, the prospect of cure is good and the risk to life not great; not to be weighed against the lingering misery with which the life of a patient with prostatic cystitis drags to its wretched close.

SOME OBSERVATIONS ON THE DIAGNOSIS OF SMALL POX.*

By Charles S. Caverly, M. D., Rutland.
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The experiences of the last four years in this country with small pox, show that our ideas of that disease (for most of us furnished by text-books and in the lecture room), are sadly in need of reconstruction. The average text-book picture of the disease is scarcely recognizable. The old landmarks, by which we were accustomed to think the disease could be surely and quickly known, have repeatedly proven unreliable.

Whatever may have been the cause, whether modified by race, climate, or successive generations of the vaccinated, small pox, to-day in America, bears scant resemblance to the gruesome plague of the past.

With these changes in its clinical characteristics is coming a new literature of the disease. This has to do chiefly with its diagnosis. Bacteriologists have so far failed to give us the same help here that they have furnished in other infections, and until the causative germ is discovered we must recognize our limitations in this particular.

Though the type of the disease is so changed, and its diagnosis often so puzzling, there is the same demand on the part of an exacting public for the early and positive recognition of the disease.

If we are to trust the statements of recognized authorities, small pox should not baffle our diagnostic powers. Da Costa says: "Ordinarily the detection of variola is extremely easy, except at its onset." (Here we may remark that it is the disease of all others in which an exact diagnosis at its onset is important.) The same author continues: "when the disorder is fully developed, all difficulty in its diagnosis ceases." Tyson says: "With the appearance of the perfect papule all doubt in the diagnosis ceases." The "perfect papule," we have learned, may be quite exceptional. So recent authority as Eichhorst says: "The recognition of small pox is not difficult." These writers had in mind, of course, the regular, unmodified, typical disease. Their views are of little aid to us in the presence of the irregular, modified, atypical disease, with which we have of late had to contend.

The recent work of Hyde and Montgomery, on skin diseases, voices the feelings of a large part of the profession as follows: "The general demand, indeed upon the physician for an exact and definite diagnosis of every case before its complete evolution, is founded upon an erroneous conception of the possibilities, and the sooner this is recognized the better for all concerned." This frank admission deserves careful thought. Brought suddenly face to face with a suspicious eruptive disease in everyday practice, the general practitioner is in a position to appreciate the meaning of these words. Briefly, he should refrain from giving an offhand opinion, he should frankly admit an honest doubt, and wait. This is frequently

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embarrassing. On an early and exact diagnosis often hinges the welfare of the patient, the safety of a critical public, and his own reputation. Yet it may be more embarrassing to be compelled later to confess to a mistake.

The following features have usually been relied on in arriving at a diagnosis in this disease:

1. A history of exposure, and an incubation period of about twelve days.

2. The initial febrile symptoms, especially chills, fever, head and back ache, ending abruptly with the advent of the eruption.

3. The eruption.
   a. Its appearance on the third day of the sickness.
   b. Its appearance on the mucous surfaces, forehead, wrists and exposed surfaces first; its greater abundance at these points.
   c. Its character; running a more or less definite course of papule, vesicle, pustule and scab; equally advanced everywhere; giving a "shotty" feel early, and later becoming umbilicated; involving the *rete mucosum* and sometimes the deeper layers of the skin.

4. The secondary or suppurative fever.

We have learned that any and all these symptoms are sometimes lacking in the disease. Undoubted cases of variola have occurred, and not infrequently, which lacked every feature mentioned.

A young, unvaccinated girl of about eight years, was taken sick in a hotel, after traveling from a distant State and attending with her mother a series of church meetings. She had a moderate fever, nausea, headache and cough. On the second day, I learned that the patient came from a community where "Cuban itch" prevailed. She was promptly removed to the isolation hospital, where the next morning she was broken out with about twenty papules, some having the typical indurated feel, which quickly became vesicles, a few were soon umbilicated and became pustular, and all disappeared in two weeks. After the initial symptoms, this child was never sick enough to be in bed.

The mother of this child, vaccinated in childhood, two weeks from the beginning of the child's illness, had for a single day a headache, and, though her temperature was not taken, she was sure she had no fever. In two days she had five or six papules on the forehead, wrist and one hand. These papules developed into nothing more, were not in the least indurated, gradually dried down and disappeared, leaving not even the reddish discoloration which marked the site of the eruption in so many of these cases. If this last case had been seen independently of the former, it would have required a vivid imagination to have seen in it a case of varioloid; and if the first had not given a history of exposure to "Cuban itch" it would surely have been overlooked, until many exposures had resulted.

An unvaccinated woman, living in a house where there was a case of varicella, had, without marked prodroma, an eruption on the body, face and a few papules on the hands and legs. The eruption was rather irregular in its development, many of the papules becoming vesicular, some umbilicated and a few pustular. The eruption was about equally thick on the face and body. With the development of the eruption she had some fever and was in bed for several days. Here was a case with a positive history of having had varicella in childhood, never vaccinated, above the age at which we expect varicella, with an eruption presenting many of the features of small pox. On the other hand, the eruption appeared without distinct initial symptoms, there were papules, vesicles and scabs at the same time, and the distribution more nearly resembled varicella than variola. In this case, it was deemed safe to keep the parties under a temporary quarantine until the nature of the disease was beyond question. It was finally decided in favor of chicken pox, a diagnosis which was verified

later by getting a typical "take" from a single vaccination.

Contrasting this case with the two former, one is impressed with the vagaries of these diseases. The comparative mildness of many cases of small pox and the comparative severity of chicken pox cases with all kinds of variations in their symptoms, make the most expert diagnostician occasionally hesitate.

Perhaps the most reliable single symptom on which to base a diagnosis, is the distribution of the eruption. In small pox the eruption appears earlier and is thickest on the exposed surfaces of the body, the forehead, face, hands and wrists, and on the ankles and feet. The reverse is generally true of chicken pox.

Still an eruption of the variolous distribution, sometimes is deceptive. I have recently seen a puzzling case, a young lady of 26, of good personal history, and successfully vaccinated four months ago. She left her home in Boston early in September, and went to a mountain town in this State, where she spent her time in the fields and woods. Twelve days after her arrival she developed an eruption confined chiefly to the hands, wrists, arms and face. She was positive she had no symptoms preliminary to the eruption, and had felt well ever since, except for a slight febrile condition a few days after the appearance of the eruption. On September 23d, the eruption appeared as a brownish, very slightly elevated eruption on the back of the hand. This was rapidly followed by a fine papular eruption on the back of both hands and wrists, shading out into a scattered papular eruption on the arms, a fine eruption of the same kind over the face, forehead and neck, and perhaps three or four isolated papules on the chest. There were also a few papules on the ankles. When seen by me September 28th, with her physician, Dr. Marshall of Wallingford, she was feeling as well as ever. The eruption was dying down, there being some scabs where the papules had been scratched. There had been intense itching when the eruption appeared. Aside from the fine pimply eruption and the scabs, the back of each hand had a blotchy red patch, somewhat like an ecchymosis. This case showed the typical distribution of a small pox eruption. For this reason and the facts that she had come from a large city, where the disease has been quite prevalent, and that the elapsing time corresponded to that of the incubation period of variola, I hesitated to pronounce unequivocally upon its nature. With so reliable a symptom as the distribution of the eruption pointing straight to variola, the absence of less reliable ones did not seem to warrant a prompt negative diagnosis. So, while this is probably a case of dermatitis, due to ivy poison or some other local irritant, the conservative plan of watching it under quarantine seemed the only safe procedure.

The pitfalls that surround the diagnosis of small pox, are not all connected with these mild forms. Purpura variola, the most malignant form of the disease, is sometimes baffling to the diagnostician. As stated by Osler and other authorities, this type of small pox sometimes ends in death before the eruption appears. In the absence of the eruption, there is no guide to a correct diagnosis of such cases except the presence of other cases in the community, or a known exposure. The following case, unfortunate and instructive, occurred in the practice of Dr. S. W. Hammond of Rutland, who kindly furnishes me the notes of the case and the autopsy.

H. S., scale-maker, 34 years, of fair general health, was well enough to work April 26. He complained, however, of some headache that day, and the following day had more headache and an added backache. Was first seen by the doctor the 28th. His symptoms then were headache, sacral pains, fever of 100° to 100.8°, and generally those of the grip. The 29th, these symptoms were all aggravated, and there was blood mixed with the saliva; throat very red and congested. His face assumed a dusky hue, and was somewhat swollen. On the 30th, he had a distinct eruption suggestive of measles, very dark in color, on the forearms and chest. This spread rapidly over the body, face and extremities, and

was especially marked on the inner aspects of the thighs. He began to bleed, on this day, from the urethra. Prostration was very pronounced. I saw the case on this day, and noted the petechial injection of the skin on the body and thighs, with slight marking of the face, and the general dusky hue of the whole body. There was little fever, but great mental dullness. The eruption was scarcely any if at all elevated. May 1, the symptoms were all emphasized, and there was considerable hemorrhage from the mouth and urethra. On this day he was taken to the hospital. May 2, face was more swollen, arms, trunk and thighs became a mass of ecchymotic spots of the size of a pea to that of a dime. During this time his fever was slight, and he still complained of his head and back. About midnight he became delirious, his temperature crept up, and he developed pulmonary symptoms and died at 5 A. M. May 3d, after six days illness.

The clinical features of this case were those of purpura hemorrhagica. The autopsy showed both lungs well congested, the mucous surfaces of the stomach and intestine injected with dark blood, spleen enlarged, the pelves of the kidneys full of clotted blood and both kidneys enlarged, the liver somewhat enlarged with ecchymotic spots beneath the capsule. None of the dozen or more physicians who saw this case or the autopsy, suspected that it was other than one of purpura hemorrhagica.

There was at this time one case of small pox in the city, and the only one there had been in Rutland County for many months. This was a man who lived more than a mile from the residence of this case, though he was employed at a fire station next door. It was not known that there was more than a passing acquaintance between the men, nor could any common source of infection be discovered.

However, two weeks after the death of the purpuric case, the sister of the patient, who had seen him during the first days of his illness, the undertaker who cared for the body and a nurse at the hospital, developed variola. Then for the first time the true nature of his sickness was suspected. This experience furnishes food for thought. When small pox of this malignant type is possible without any eruption of the small pox appearance, it behooves physicians to be constantly on their guard.

The diseases with which small pox has been oftenest confounded, are measles, scarlet fever and the grip (in its early stages), impetigo, syphilis, acne and drug eruption, eczema and chicken pox.

Beware of the latter. Probably more mistakes have been made in connection with chicken pox than with all the other diseases together.

Each case is a study in itself. This is especially true when the disease is not known to exist in the neighborhood. The presence of other cases always furnishes important confirmatory evidence.

When, however, the disease is so widespread through the country as during recent years, it may appear anywhere most unexpectedly. Persons exposed on the streets of a large city, or in a distant State may travel far before the incubation period expires. They may bring small pox under the innocent guise of varicella or some other simple affection.

Physicians will therefore always remember the danger of fresh importations. The first case is always the key to the situation.

My object in presenting this paper is to call attention to the anomalies of the disease, and to urge caution in rendering an opinion on the diagnosis of doubtful cases.

There are some symptoms that are very reliable in arriving at a diagnosis: such are the initial febrile attack ending abruptly with the eruption, the distribution of the eruption and its earlier appearance on the exposed surfaces of the body, and its uniform development.

Other symptoms which figure prominently in the classical disease, such as the character of the eruption at its various stages, the incubation period and the appearance of the eruption on the third day of the sickness, and the secondary fever, are less reliable.

Still when we are liable to encounter this modern type of the disease which has caused so much controversy of late, a type which is decidedly atypical, a frank confession of "don't know" is the only safe refuge of the physician.

It is unfortunate that this is so. It is still more unfortunate to subject a family to the

annoyance of a needless small pox quarantine, or on the other hand to release an innocent looking case of small pox on an unsuspecting community.

So I suggest that we recognize our limitations and act accordingly. The disease cannot yet be quickly and surely diagnosed in every case. Hyde and Montgomery are right when they say that a demand for this "is founded upon an erroneous conception of the possibilities."

Doubtful cases should be held in quarantine for observation. The true nature of the disease will declare itself if we are patient. The friends and the public may be impatient, but in the end they will applaud our honesty.

SOME REMARKS ON NERVOUS COUGH

By Elmore Palmer, M. D., Buffalo, N. Y.

Every practitioner has occasion to meet with cases of so-called nervous cough which are not readily amenable to treatment, because of the difficulty of determining the cause of the trouble. Frequently these patients are neurasthenic or hysterical, and the cough is one of the nervous phenomena of this affection. In others it may be a reflex symptom due to the disease of various organs, such as the stomach or even the uterus; and in still others a sort of "cough habit" is established after an attack of bronchitis, laryngitis, or pharyngitis, the patient continuing to cough after the disease has been entirely cured. Then it must be remembered that in certain diathetic conditions, such as gout or a rheumatic tendency, cough may be one of the manifestations resulting from irritation of the nerve filaments in the respiratory tract, due to toxic material circulating in the blood. It has also been frequently observed that mothers of children suffering with whooping cough sometimes acquire a sort of nervous cough of sympathetic origin. These are only a few of the more prominent instances in which cough is the result of disorders of the nervous system.

In the treatment of these cases of nervous cough it is usually necessary to resort to some sedative, as the constant cough harasses the patient and often renders continuous sleep at night impossible. Morphine is generally contra-indicated because of its unpleasant by-effects and its tendency to cause a habit. Codein is a much safer though less efficient remedy. It is, however, rather unreliable, and for this reason I have lately resorted to heroin hydrochloride in small doses, which fulfills the indications much better than any other remedy used, its soothing influence not being accompanied by any disagreeable by-effects, such as disturbances of the digestive organs or nervous depression. In some of my cases the administration of heroin alone was sufficient to cure the cough, while in others it was employed as a palliative in connection with other treatment.

To give an idea of its dosage and the character of the cases treated, I would report the following histories:

Case I. A widow, aged 54, had neuralgia on the right side of the face and back of the neck for ten years. There were muscular twitchings with drooping of the upper eyelid. She was also troubled with a very harassing cough, which was very obstinate to treatment. Her general health was fair, except for slight indigestion. After correcting the secretions and toning up her stomach, heroin hydrochloride was given in 1-24 grain tablets, with directions to take one often enough to quiet all her nervous symptoms, say 6 to 8 to 12 or more tablets in 24 hours. I told her that they would certainly relieve her in a short time, and requested her to call within a week. This she did—a happier patient I have never seen. The tablets were continued as occasion required for a month, all other medication being suspended. This was last April, and there has been no neuralgia, twitchings, or drooping of the eyelids since. I saw her only a few days ago, and she was in a very happy mood,the cure being permanent.

Case II. Woman, 38 years old, married. The general health was very satisfactory, all the functions seeming to be normally performed. Her only complaint was a tickling sensation low down in the larynx, causing an almost con-

tinuous slight hacking cough, clearing the throat, as it were. After using various remedies, such as expectorants, antispasmodics and different inhalations, without any improvement, I prescribed heroin, 1-12 grain, four times a day, or oftener, if necessary. After one day's use of the drug all tickling and hacking stopped. I ordered the remedy to be continued, reducing the dose to 1-24 grain, t. i. d., and she has had no trouble since.

Case III. Boy, 9 years old, strumous, coughs at night, but very little or none at all during the day. General tonic treatment was employed, under which he gradually improved, but the cough at night still continued. Heroin hydrochloride was added to the treatment in doses of 1-24 grain, t. i. d., the last dose to be taken at bedtime. After the second night the cough had completely subsided and has not reappeared up to the present time, a period of one month.

Case IV. A man, 59 years old; nervous cough, asthmatic in character, which kept him awake at night. Heroin hydrochloride, 1-12 grain, every one, two, or three hours, cured him permanently in three weeks. No trouble since.

REMOVAL OF THE BLADDER FOR CANCER, WITH REPORT OF A CASE.

By A. Lapthorn Smith, M. D., Surgeon-in-Chief of the Samaritan Hospital for Women, Montreal, and Professor of Gynecology in the University of Vermont, Burlington, etc.

After reviewing the great advances which had been made in the surgery of the bladder in recent years, especially in the management of fistulae and injuries to the ureters, the author took up the subject of removal of the bladder. He gave a brief historical outline of one hundred published cases from which it appeared that when the operation of removal of the bladder was done for malignant disease the death rate was over 50 per cent, while in cases of exstrophy and other non-malignant conditions the death rate was only 19 per cent. He was strongly of the opinion that with greater experience in technique the mortality of the non-malignant cases would fall much below nineteen, while in the malignant ones when the disease was recognized and removed much earlier, the high death rate of over fifty per cent would be reduce to less than twenty-five, just as it had been in hysterectomy for cancer which was 75 per cent twenty-five years ago but was now less than five. He therefore urged all practitioners to look out for this disease, the cystitis and hemorrhages being among the early symptoms, and not to lose precious time in unavailing local and medicinal treatment. His own case was misleading because she had a fibroid tumor the size of an orange pressing on the bladder, for which the patient was taken into hospital and the tumor was easily removed by myomectomy. Her bladder symptoms not being relieved a button hole was made and the bladder explored by the finger when the cancer was found occupying the trigone. Two weeks later abdomen was opened, peritoneum pushed back, ureters cut off and attached to vagina and bladder removed together with enlarged pelvic glands. Patient rallied well and was making good recovery until sixth day when she rapidly collapsed and died. She was sixty-five years of age and in poor condition and the disease was too far advanced. *(Author's Abstract.)*

SPECIAL THERAPEUTIC ARTICLES

THE METHODS OF USING ARGYOL.*

By A. C. Barnes, M. D., Philadelphia.

In accepting your kind invitation to read a paper before you I am deeply conscious of the honor conferred upon me, because many of your members occupy positions equal in honor and eminence with the leaders in modern progressive medicine. The subject I have chosen was selected for two reasons: first, as a body of practical physicians interested in the extremely important question of the treatment of disease,

* Read by invitation of the 14th Annual Meeting of the Tri State (Alabama, Georgia, Tennessee) Medical Society, Birmingham, Ala., Oct. 9, 1902.

my subject will probably be interesting; second, my paper will be of the nature of an open letter in reply to many inquiries received from physicians in practically every State in the Union.

The original report of my colleague, Dr. Herman Hille and myself, Medical Record, May 24, 1902, concerning our discovery of a new silver salt, was given considerable prominence in the medical press of America and Europe particularly because of its wide field of application in therapeutics. This salt, now known as Argyrol, is chemically silver vitellin, the principal features of which are, the high amount of silver contained, its easy solubility, its intense penetrative action and its freedom from the irritating properties possessed by the other silver salts. It is beyond the scope of this paper to deal with the chemical nature of the salt, and those interested therein are referred to our original report.

It is to the clinical applications of Argyrol that I would now direct your attention and more especially to the methods of using the product in inflammatory conditions of the eye, ear, nose, throat and genito-urinary organs. The methods herein mentioned are those employed in the various clinics in many hospitals including the University of Pennsylvania, City Hospitals of New York and Boston, Jefferson, Good Samaritan, Berlin Polyclinic, Children's Hospital, Philadelphia, and in some eye and ear infirmaries of several of our large cities, by surgeons whose names and reputations are well known to you: Martin, Thomson, Horwitz, Swinburne, Christian, Lewis, Lederman, Mellor, etc. Most of these surgeons are preparing or have already finished clinical reports embodying their experiences with the salt, which will be published shortly. My paper will be merely a short resume of the methods of using the product now in vogue.

Diseases of the eye:—Those oculists using Argyrol employ it in the conditions formerly treated by silver nitrate or protargol. The rationale of its use in these diseases is based upon its high proportion of silver, its deep penetrative action and its entire freedom from irritating properties—for instance: A 20 per cent solution of Argyrol corresponds to about 10 per cent solution of silver nitrate, yet this strength of Argyrol may be dropped in the normal eye without producing irritation or discomfort.

In *purulent conjunctivitis* a 25 per cent solution has been found to be the proper strength for routine use. Well established cases of *opthalmia neonatrum* thus treated will be eradicated in two or three days. In the last ten cases of this affection treated by Mellor at the University Hospital, one day's use of 25 per cent solution Argyrol sufficed to rid the eyes of pus and effect uninterrupted recoveries. The Argyrol solution should be dropped in all parts of the conjunctival sac every three or four hours. With treatment instituted early in the disease, corneal complications do not occur.

Gonorrheal ophthalmia is best treated by strengths of 25 to 50 per cent solution according to the stage and extent of the infection. In very severe cases a 50 per cent solution instilled every two or three hours produces a reduction of the purulent secretion and affords comparative relief from pain.

An ordinary early case of this disease treated with free use of 25 per cent solution every two or three hours will terminate within a few days. For the catarrhal condition of the conjunctiva resulting from gonorrheal ophthalmia, many oculists direct the instillation of a 10 per cent solution of Argyrol three or four times daily; this may be done with perfect safety by the patient at home.

The effects of Argyrol in *trachoma* are still unsettled. Gilfillan of New York used it at the House of Refuge with indifferent results; Thomson mentions one very pronounced case in which the lids were so swollen that it resembled ptosis and in which he obtained great improvement by painting the affected lids with 20 per cent Argyrol solution; this case had been treated with protargol without benefit.

For ordinary *catarrhal conjunctivitis* a 5 or 10 per cent solution for use by the patient at home three times daily, with the local application of a few drops of a 25 per cent solution by the attending physician, produces in most instances prompt and permanent benefit; this same method of treatment is employed in blepharitis, blepharo-conjunctivitis and blenorrhea. The most suitable strength for all around office use in treating corneal ulcers and the ordinary inflammatory conditions of the eye, is 25 per cent; this strength does not cause irritation or discomfort.

The methods of using Argyrol in diseases of the *nose, throat* and *ear* are perhaps best illustrated by quoting the experience of Dr. M. D. Lederman of New York, who has been using it for four months in his private work and at his clinics at the Manhattan Eye and Ear Hospital and at the New York Polyclinic. Dr. Lederman states: "I have employed solutions from 10 to 50 per cent in catarrhal manifestations of the nasal,pharyngeal and laryngeal mucous membrane; the applications were made with the usual cotton carrier every other day. The advantage this silver salt distinctly demonstrates, is its freedom from irritation when applied to sensitive mucous membranes. In acute and sub-acute *laryngitis,* I have used a 10 per cent solution increasing to 30 per cent without the least unpleasantness to the patient. After two or three treatments the congested appearance of the membrane gradually left and the voice returned in good volume; I particularly noticed that the harsh and dry sensation produced by silver nitrate was never experienced. The secretion was promptly stimulated by the Argyrol solutions and produced a comfortable feeling of moisture in the pharynx and larynx. In *post-nasal catarrh* the character of the discharge was influenced by the Argyrol solutions (20, 30 and 50 per cent). The thick plugs of mucus so frequently expectorated in cases of *naso-pharyngitis* and in *inflammations of the lymphoid tissues* in the pharyngeal vault, became more fluid in consistency—showing the stimulating effect of the drug upon the mucous glands—and thus permitted the re-establishment of the normal function of the membrane and relieved the annoying symptoms of hacking and dropping in the throat; the same effects were noted from applications to the nasal mucous membrane.

The bland nature of the Argyrol solutions was especially observed in cases of so-called "Hay Fever." Ten and 20 per cent Argyrol solutions, while naturally exciting some sneezing, as would result from any foreign element, seemed to lessen the existing hyperaesthesia and retard the excessive flow of secretion; this blenostatic action I believe is due to the deep penetration of the Argyrol.

The decided anti-germicidal action of the salt is illustrated by its effect in cases of *chronic purulent otitis media* with osseous necrosis. In these cases I employ a 50 per cent solution, freely in the middle ear cavity without any annoyance to the patient. The purulent character of the discharge is obviously modified after a few treatments and assumes a mucoid appearance."

In empyema of the antrum of Highmore, Hitschler uses a 50 per cent solution of Argyrol once daily and notes prompt disappearance of the purulent discharge.

Genito-Urinary Diseases.—Dr. Orville Horwitz, Professor of Genito-urinary Surgery, Jefferson Medical College, treats acute cases of Gonorrhea by ordering the hand injection of a 5 per cent solution of Argyrol several times daily with whatever modifications and additions to treatment the cases may demand.

In acute gonorrhea, Dr. H. M. Christian, Professor of Genito-Urinary diseases, Philadelphia Polyclinic, employs a 2 to 5 per cent solution by injection (by ordinary hand syringe) three or four times daily; the solution is held in the urethra five minutes. If the entire urethra is involved, he employs daily irrigations of 1 to 1000 solution.

In *chronic posterior urethritis* he makes deep instillations of 5 or 10 per cent solutions. Of his first 48 acute cases thus treated, 43 showed

complete disappearance of gonococci from the discharge within fourteen days; 38 of these patients were discharged cured in from two to four weeks.

In no instance did the injections produce irritation or discomfort.

Dr. G. K. Swinburne, Surgeon to the Good Samaritan Dispensary (the largest genito-urinary clinic in New York) has treated over 400 cases of Gonorrhea with Argyrol. His methods are as follows: In acute cases he irrigates the urethra daily with a 1 to 1000 or 1 to 2000 warm Argyrol solution and follows this by a 2 to 5 per cent injection. If the patient cannot report daily, he orders the home use of a 2 per cent injection. He uses Argyrol solution for irrigation where formerly he used potassium permanganate or protargol, because of better results and greater comfort to the patient.

In *posterior urethritis* and *cystitis* he makes deep instillations of a 5 or 10 per cent solution. In chronic cases and in those requiring sounds, he employs an ointment of 5 per cent Argyrol in lanoline, the ointment being distributed along the urethra by the successive use of several sounds upon the end of each of which the ointment is placed.

In acute cases of gonorrhea seen during the first or second day of the attack, he injects a 20 per cent solution and has succeeded in aborting the disease.

Briefly stated, the advantages noted in the Argyrol treatment of urethritis are: the shorter duration of the disease, the power of the drug to allay the inflammation, the comparative comfort afforded the patient and the entire freedom of the injections from irritating properties.

Diseases of Women.—In *specific urethritis* in the female, Kevin injects a 10 per cent solution into the urethra and bladder. In purulent conditions of the vaginal mucous membrane, the vagina is douched with 1 to 2000 or 1 to 1000 Argyrol solution, after which local applications of a 25 to 50 per cent solution are made through a speculum; these same methods are employed in ulcerations and erosions of the cervix.

Cases of *cystitis* are irrigated with 1 to 1000 solution followed by the injection of a 5 or 10 per cent solution into the bladder which is retained there for a few minutes and then discharged by urination.

In *obstetrics,* Argyrol is probably destined to play an important part because of its usefulness as a prophylactic against *ophthalmia neonatorum.* In several maternity hospitals the instillation of a 1 or 2 per cent solution into the newly-born infant's eyes, is a routine practice.

Other clinical conditions in which the use of Argyrol has been suggested and is being tried, are erysipelas (suggested by Dr. E. B. Gleason, Medico-Clururgical Hospital, as local applications 25 to 50 per cent solution), and certain pathological conditions of the mouth and teeth (suggested by Dr. W. H. Snider of the University of Buffalo). It is too soon to make any positive statements of the methods or effects of using Argyrol in these two latter conditions.

It will be noted in reviewing my paper that Argyrol has been used in almost every branch of surgery, but it will be recalled also that silver has been for many years the principal drug in nearly all of these conditions. Silver nitrate is a very valuable remedy but its chemical nature necessarily endows it with certain drawbacks, viz: it is irritating, caustic, is chemically changed by the secretions, and is not penetrating much beyond the surface. Argyrol is not chemically changed by the secretions, possesses intense penetrative power, whereby the effects of silver are exerted in the sub-mucous structures (where they are most needed) and may be used in any structure of the body, in almost any strength without destroying tissue or producing irritation. Furthermore (as all the surgeons mentioned herein have noted and commented upon), Argyrol has one very marked property, i. e., its effects in allaying the signs and symptoms of inflammation.

24 N. 40th Street.

NEWS, NOTES AND ANNOUNCEMENTS.

VERMONT SOCIETY FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.—This society was organized at Burlington, September 28th, by a number of physicians and laymen from the different parts of the State. A constitution was adopted, and various phases of tuberculosis were discussed. Following are the officers:

President—Hon. D. C. Hawley, Mayor of Burlington.

Vice-Presidents—Drs. Don D. Grout, Waterbury, and Charles W. Peck, Brandon.

Secretary—Dr. H. Edwin Lewis, Burlington.

Treasurer—H. L. Stilson, Bennington.

Executive Committee—Dr. H. D. Holton of Brattleboro, Dr. W. N. Platt of Shoreham, Hon. Henry Ballard of Burlington, Dr. E. H. Ross of St. Johnsbury.

The following resolutions were adopted:

WHEREAS, The widespread occurrence of tuberculosis in any community presents problems which in the highest interests of humanity, charity and the public welfare should engage the attention of all thinking people; and

WHEREAS, Tuberculosis, a disease that scientific study has shown to be preventable and curable to a marked extent, is responsible for more suffering and deaths in Vermont than all other transmissible diseases combined, and

WHEREAS, It has been amply demonstrated that the arrest and cure of tuberculosis can be best accomplished in properly arranged and controlled sanitaria,

Therefore, Be it Resolved, That we, the Vermont Society for the Study and Prevention of Tuberculosis, do hereby earnestly urge and recommend the establishment of a State sanitarium in Vermont for the proper care of consumptives; and

Furthermore, Be it Resolved, That the committee on legislation of this society should present the matter for the consideration of the assembly of 1902, and use every legitimate means to insure the passage of a bill providing for the establishment of a Vermont sanitarium for State consumptives.

Also these resolutions:

WHEREAS, It is the consensus of scientific opinion that bovine tuberculosis is a real menace to public health; and

WHEREAS, The efforts of the Vermont Board of Agriculture and Cattle Commission to eradicate tuberculosis from Vermont cattle have been attacked and severely criticised;

Therefore, Be it Resolved, That, we, the Vermont Society for the Study and Prevention of Tuberculosis do express our appreciation of the honest and painstaking work of the Vermont Cattle Commission;

Resolved, That whatever modifications may be made in the present laws relative to bovine tuberculosis we earnestly protest against the removal or relaxation of any measures which tend to lessen or eradicate bovine tuberculosis.

The Society adjourned to the first Wednesday in November, at Montpelier.

ABEL MIX PHELPS, M. D.—Dr. Phelps, an orthopædic surgeon of world-wide reputation, and until recently Professor of Surgery at the University of Vermont Medical Department, died at the comparatively early age of fifty-one, as the consequence, it is understood, of malignant disease of the omentum. He was a graduate of the medical school of the University of Michigan, of the class of 1873. He was a native of Vermont, but his professional career was passed in the State of New York, a portion of it in Chateaugay, but the greater part in New York City. He had served a term as president of the Medical Society of the State of New York, and for several years preceding his death he was a professor of orthopædic surgery in the Post-graduate Medical School. He was a surgeon of much originality.

THE RUTLAND COUNTY MEDICAL AND SURGICAL SOCIETY.—A meeting of the Rutland County Medical and Surgical Society was held at the Berwick House, Rutland, Tuesday, Oct. 21. The following excellent program was presented:

LOBAR PNEUMONIA.

Paper—Etiology and Pathology,
Dr. F. E. Clark, Burlington.
Instructor in Pathology, U. V. M.
Discussion, C. C. Perry.
Paper—Diagnosis and Symptoms,
George Rustedt.
Discussion, G. G. Marshall.

Paper—Treatment, C. S. Caverly.
Discussion, N. N. Townsend.
Paper—Complications and Sequelæ, George D. Parkhurst.
Discussion, O. C. Baker.

By invitation, Dr. H. Edwin Lewis, Secretary of the Vermont Society for the Study and Prevention of Tuberculosis, was present and made a few remarks on State needs in our local struggle with tuberculosis. At the conclusion of Dr. Lewis' remarks, the Society voted that the President appoint a delegate to attend the forthcoming meeting of the Vermont Society for the Study and Prevention of Tuberculosis, at Montpelier, and assist in every way in obtaining necessary legislation.

PTOMAINE POISONING.

(Reprinted from *The Medical Summary*, May, 1902.)

To the Editor of the Medical Summary:

During the past summer I had, perchance, more cases of ptomaine poisoning than in all my previous twenty-nine years of active practice. I presume that the prevalence was greatly due to the extraordinary heat of this summer. Notwithstanding the severity of the cases, my patients all recovered.

Before entering into a detailed description of some of the most severe cases, a definition of the word "ptomaine," with some views of competent authors, will be well placed here.

"Ptomaine," says V. C. Vaughn, "may be defined as an organic chemical compound, basic in character and formed by the action of bacteria on nitrogenous matter." He further states that "some fish are always poisonous. Others are poisonous, or at least markedly so, only during the spawning season. Still others are subject to epidemic bacterial diseases, and those affected with certain of these diseases furnish flesh that is toxic to man, or in other words, the bacterial disease is transmitted to man with his food. Lastly, fish, like other kinds of meat, may become infected with saprophytic germs that may harm man."

Schmidt says: "The poisonous substance is not distributed throughout the animal, but is confined to certain parts. The poisonous portion cannot be distinguished from the non-poisonous, either macroscopically or microscopically."

I treated altogether twelve cases, of which nine were fish, and three lobster poisoning.

The best illustration of a severe case of fish poisoning, is the case of William R., a grocer, thirty-two years of age, of robust and good health. He made his lunch of fish (none in the family could give me any information about the class of fish). It was an unusually hot day, in the month of July. He felt no discomfort until after midnight that day, when he was awakened by nausea and griping pain in his bowels. Soon vomiting set in of mucus, colored with bile. When I was summoned, I found the man with cold perspiration pouring down his face. Soon after, fever set in to a temperature of 102; pulse, 140; respiration about 40, shallow and irregular. Pain in the stomach and intestines, with great sensitiveness on pressure. I proceeded to wash his stomach and large intestines, administering right after a dose of five grains of calomel, following it up, the coming morning, with a bottle of citrate of magnesia, for the cleansing of the small intestines. Morning temperature, 101; pulse, 130; with excessive tenderness to the digestive tract. Second day, temperature the same, pulse more firm; sensitiveness to stomach and bowels diminished; having had a number of watery stools during previous day and night. I prescribed an antiseptic intestinal wash, Glycozone, two ounces, hot water, twenty-four ounces, for mornings and evenings. At my evening's call the temperature was 100; pulse, 110; respiration, 28. Having had some favorable experience with the internal use of Glycozone in acute gastritis, I then prescribed a teaspoonful to be given, diluted with water, every three hours. This treatment was kept up for a week, until all unfavorable symptoms disappeared.

The other case of serious nature was a lobster poisoning. Mrs. S., about twenty-five year of age, was eating a "fresh" lobster in a fist-class restaurant, at night, after a theatre performance. She felt some discomfort right after eating it, but thought to counteract it by drinking a big dose of whiskey. She slept all night without disturbance. However, in the morning, when I was summoned, I found her suffering from nausea, vertigo, ringing in the ears, "like big bells," as she expressed it, pain in all the joints, and griping pain in the bowels; no stool. Temperature, 101.5; pulse, 140; respiration, 36. The same treatment as above was prescribed, and the woman made a quick recovery.

All other cases were treated similarly, with gratifying results.

However, taking good advice from my first case, I started with the antiseptic treatment at once, as I don't know of any better remedy to stop vomiting than Glycozone.

Alex. Rixa, M. D.

New York.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

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BURLINGTON, VT., October 25, 1902B

EDITORIALS.

THE VERMONT STATE MEDICAL SOCIETY. —The 89th Annual Meeting of the Vermont State Medical Society, held in Burlington, October 9-10, was unusually successful from every standpoint. The program, as printed in last month's issue, was carried out without change and the many excellent papers presented were thoroughly enjoyed by large audiences at each session. The addresses by President J. B. Wheeler, Dr. M. F. McGuire and Dr. A. Lapthorn Smith were of a high order, and, well worthy of the commendation they received.

The discussions this year of the papers read were unusually interesting. A large number took part and thus added in no small way to the success of the program.

One of the most valuable and scientific contributions to the work of the meeting, was the able discussion of Dr. Berkley's paper on "Subdural Abscess," by Dr. M. C. Twitchell of Burlington. It is a pleasure to listen to a man who understands his subject, knows what he is talking about, and more than all is able to express himself intelligently without unnecessary verbiage. Dr. Twitchell spoke earnestly and forcefully, and plainly showed his mastery of the subject under discussion. His language was excellent but withal simple, and his whole treatment of the subject highly interesting and comprehensive. No other discussion was more closely followed nor more thoroughly enjoyed than that of Dr. Twitchell. He made a strong plea for more careful treatment of chronic suppuration of the middle ear and showed the great etiologic importance of this common malady in the development of sub- and extra dural abscesses.

Dr. C. W. Bartlett of East Dorset, was another member whose remarks were listened to with close attention, and his discussion of President Wheeler's able address on Modern Treatment of Prostatic Hypertrophy, with a narration of his experience with the Bottini instrument, was very interesting.

Others who discussed the papers and addresses, were Dr. H. C. Tinkham, Dr. H. D. Holton, Dr. Don D. Grout, Dr. W. H. Vincent, Dr. C. F. Camp and Dr. J. S. Hill. These gentlemen are all good speakers and not only had something to say, but knew how to say it. Two other papers of especial value were those by Dr. W. W. Townsend, on Urethral Stricture, and Dr. C. S. Caverly, on Some Observations as to the Diagnosis of Small Pox. Both were scholarly productions.

The annual banquet was held on the evening of October 9th, at the Van Ness House. Over eighty members were seated at the tables and enjoyed an appetizing banquet that followed. Grace was said by the Rev. G. G. Atkins, after which the several courses were served. At the close of the banquet cigars were lighted and Dr. W. N. Bryant, who acted as toastmaster, made a few remarks appropriate to the occasion. He was followed by a series of witty speakers, who occupied the time until after 1 o'clock. The remarks were largely of a humorous nature, although Dr. C. W. Peck of Brandon, brought up the subject of securing an appropriation for the establishment of a State sanitarium for tubercular patients that was received with satisfaction by those present.

The first speaker of the evening was Dr. J. B. Wheeler of Burlington, and the others were Mayor D. C. Hawley, the Rev. G. G. Atkins,

Dr. A. P. Grinnell, Dr. Henry D. Stearns of Hartford, Conn., Dr. H. D. Holton of Brattleboro and Dr. C. W. Peck.

The House of Delegates provided by the reorganization, assumed the business of the Society, and much satisfaction was felt for the new regime. All business was transacted smoothly and unobtrusively, without the slightest interference with the scientific work of the Society. The personnel of the House of Delegates assures the success of the plan, for it is evident that the highest interests of the Society are in safe hands.

Dr. G. H. Gorham received a fitting compliment for his past year's work in a re-election as Secretary. The universal opinion was that he had filled the office most acceptably, to the credit of himself and the satisfaction of his many friends.

The report of the House of Delegates gave the following resolution that had been passed by them:

Resolved, That it is the sense of the House of Delegates that the sections two and three of article two of the new by-laws are not to be retroactive in their application, that they take effect to-day and that any regular physician residing in Vermont of good standing in the profession may become a member of any county society or of the State society upon the payment of the dues.

The report also stated that an invitation had been extended to the society to hold its next annual meeting at Bellows Falls and that the invitation had been accepted. The delegates announced that they had made their organization permanent by electing Dr. D. C. Hawley chairman and Dr. J. H. Hamilton of Rutland, secretary. The list of officers elected was presented as follows:

President—E. M. Pond of Rutland.

Vice-Pres.—Dean Richmond of Windsor.

Secretary—George H. Gorham of Bellows Falls.

Treasurer—B. H. Stone of Burlington.

Auditor—J. H. Blodgett of Saxton's River.

Executive Committee—E. M. Pond, J. B. Wheeler and G. H. Gorham.

Publication Committee—G. H. Gorham of Bellows Falls, G. R. Anderson of Brattleboro and E. R. Campbell of Bellows Falls.

Committee on Necrology—M. H. Eddy of Middlebury, C. S. Scofield of Richford and E. H. Martin of Middlebury.

Legislation Committee—W. N. Platt of Shoreham, M. F. McGuire of Montpelier and H. C. Tinkham of Burlington.

License Censors—Henry Janes of Waterbury, W. H. Vincent of Orwell and S. W. Hammond of Rutland.

Anniversary Chairman—C. W. Peck of Brandon.

The following delegates were appointed: University of Vermont, L. A. Russell of Randolph and W. N. Platt of Shoreham; Maine Medical Society, F. F. Garland of White River Junction and J. H. Blodgett of Saxton's River; Massachusetts Medical Society, Dr. Hodgkins of Brattleboro and Dr. Berry of Poultney; Rhode Island Medical Society, W. D. Huntington of Rochester and L. M. Green of Bethel; New Hampshire Medical Society, J. E. Hartshorn of St. Johnsbury and J. M. Hamilton of Rutland; New York State Medical Society, A. B. Bisbee of Montpelier and J. N. Jenne of St. Albans; Northern New York Society, E. H. Ross of St. Johnsbury and F. C. Liddle of Dorset; White River Medical Society, E. A. Crampton of St. Johnsbury and J. L. Hill of Bellows Falls; Connecticut River Valley Medical Society, George Bartlett of North Bennington and F. C. Phelps of Vergennes.

Tuberculosis Legislation.—There are two bills before the present legislature that are of especial interest to every one interested in the local struggle with tuberculosis. The first is a bill providing for the notification of tuberculosis, as follows:

Section 1. It is hereby enacted that every physician engaged in the practice of medicine in the State of Vermont shall immediately upon the passage of this act submit to the secretary of the Board of Health, the names and addresses of all persons under his treatment for tuberculosis and thereafter each case within one week after applying for treatment.

Sec. 2. The secretary of the State Board of Health shall keep a careful and accurate record of all reported cases of tuberculosis, not for publication, but for such purposes as are

necessary for the State Board of Health in the discharge of their duties, and immediately after being notified of each case shall send to the address given a printed circular containing proper information in regard to the disposal of sputum and such other facts, hygienic or otherwise, as are necessary for the welfare of the person afflicted and the protection of the community in which he lives.

Sec. 3. Failure on the part of a physician to conform to this act will constitute a misdemeanor punishable by a fine of not less than five nor more than fifty dollars, or ten days imprisonment, or both.

Sec. 4. This act shall take effect upon its passage.

The second is a bill creating a tuberculosis commission, as follows:

Section 1. The governor shall appoint in December, 1902, a State commission of five members, at least three of whom shall be legally qualified physicians, for the purpose of investigating the prevalence and extent of tuberculosis in Vermont, the need of a State sanitarium for consumptives, and such other matters pertaining to tuberculosis as may properly engage their attention in connection therewith.

Sec. 2. This commission shall meet at least once every three months, and each member shall receive a nominal fee of three dollars for each day's attendance at such meetings, and an allowance for such expenses as are actually incurred in the discharge of their duties, the same to be paid on the governor's order on proper presentation of statements.

Sec. 3. This commission shall serve until the next legislature and shall make a complete report thereto of the results of their investigations, together with such recommendations in regard to a State sanitarium for consumptives, its location, cost, etc., as they may deem advisable.

We do not see how there can be any substantial objection to either of these measures. Although tuberculosis is a fighting word at Montpelier, this year, even those who are the most rabid on the subject as it refers to cattle, must recognize and admit the dangers from human tuberculosis and the careless disposal of sputum loaded with the infective agent.

In regard to bovine tuberculosis, it is the *possible* danger that justifies restrictive measures. But from human tuberculosis, the danger is not only possible, it is probable and certain in a large percentage of cases. Therefore every measure tending to modify to the smallest degree the constant menace from carelessness on the part of those afflicted with tuberculosis, ought to receive the hearty support of every man who holds dear the health of his family and community. As the bill sets forth, the object is not to quarantine consumptive patients, nor make their cases public. The idea is simply to enable the proper authorities, the State Board of Health, to directly place proper information at points where it is needed most and where it can do the most good in limiting the spread of infective material. Most consumptives are willing to cooperate for the good of others as well as themselves, and the most flagrant acts of promiscuous expectoration are usually the result of ignorance instead of maliciousness. Properly warned and advised, every consumptive therefore can give valuable assistance in fighting down this terrible disease that annually causes one-tenth of all the deaths in Vermont. It ought to be apparent that this bill providing for the notification of tuberculosis has no other motive than to enlist the aid of afflicted persons in behalf of themselves and the community in which they live.

In regard to the bill creating a tuberculosis commission, it may be said that it is simply in line with what has been done in many other States, notably, Massachusetts, New Hampshire, New York, New Jersey, Maryland, and Ohio. It does not seem that serious objection can be raised against it. Certainly the question of expense ought not to be considered for five hundred dollars will much more than cover the total expense of the Commission during the two years of its existence. The commission is not large, consisting only of five members,while those in other States in all but one case have been composed of seven or eight members. The Vermont Commission could not well be smaller for if it is too small their deductions

and recommendations cannot help but be more or less personal and limited. The object of a commission for any purpose is to consider a question in all its phases, and if large enough their deductions represent a broader and more comprehensive view of the whole situation.

A Vermont Commission for the investigation of tuberculosis will have a vital question to consider and it must be large enough to look at the question from every standpoint. It is right that three members should be physicians and equally right that the laity should be represented in the consideration of so important a subject. From the requirements of the bill the Commission will have to investigate the extent of tuberculosis in the State, and also study the contributory factors of climate, soil, sanitary and social conditions. If the facts obtained by them justify the need of a State Sanitarium, then they will have to study what other States are doing, consider the special needs of Vermont and submit to the next legislature careful but complete plans and specifications for action. Their task will not be a light one and the specific character of their duties makes a *special* well balanced commission a *desideratum.*

In the interests of the people of Vermont, we can assure our legislators the earnest and undivided support of the medical profession for these two worthy and necessary bills. May they be loyal to the highest interests of their constituents, and the needs of Vermont.

EDITORIAL NOTES AND CLIPPINGS.

Habitual Abortion.—One of the most discouraging classes of patients applying to physicians for treatment, is that composed of women who are victims of the abortion habit. In the great majority of instances they are women who really want children and in no way are intentionally to blame for their repeated miscarriages. Their condition is truly pitiful, for their psychic condition becomes morbid and unnatural, and many times the happiness of their homes is seriously jeopardized.

This condition is worse than being sterile, for they have the probabilities of maternity thrust upon them, only to have their dearest hopes dashed to the ground before consummation. The sterile woman never has her hopes aroused only to be snatched away when near to realization, nor has she to undergo any of the dangers and suffering incident to a miscarriage. Both conditions deserve our best efforts, but particularly the woman who habitually aborts.

In treating, or rather aiming to prevent repeated miscarriages, due consideration must be given to every contributing factor. The causes are legion, but in each case there is usually one particular pathologic condition that acts as an exciting cause. It may be general debility, pronounced anemia, syphilis, diseased conditions in the pelvis, malpositions, or chronic inflammatory conditions in the uterus, extreme irritability of the uterine muscle, cervical lacerations, constipation, excessive venery during the early months of pregnancy (a very common cause), or many other conditions. In any event, careful interrogation of each case should be followed and the facts considered in their individual aspects. Pathologic conditions requiring surgical treatment should be cared for immediately, and every effort made to put the pelvic organs into as nearly normal condition as possible. Then steps should be taken to increase the patient's vitality to the highest possible point and at the same time allay any undue irritability of the uterine muscle. Everything tending to local or reflex irritation of the genital organs should be strictly avoided, and especially at the times corresponding to the menstrual periods. Rest in a recumbent position at these times should be required and coitus particularly interdicted.

The internal administration of medicines can do a great deal of good. Conditions of debility or anemia require special treatment, as of course does syphilis. Careful attention should be paid to the bowels and digestion.

The slighest pelvic pain should be relieved at once by codeine or morphine in small doses.

At the periods corresponding to menstruation nerve sedatives should be zealously employed to insure complete repose and quiet. To decrease uterine irritability, the antispasmodic remedies are useful, but viburnum prunifolium is the best drug at our command, either alone or in combination. Experience has shown that some good combination is preferable for the sake of the patient's stomach and palate. Of all that are on the market, the old and well-tried Hayden's Viburnum Compound is without an equal. It is remarkably palatable, and uniformly standard in quality. As a uterine sedative it cannot be surpassed, and in the prophylaxis of abortion, particularly cases without apparent cause, it is truly a remarkable remedy. It should be given a teaspoonful in a half glass of hot water every three or four hours for the week preceding and the week after the time when menstruation would normally occur. In some cases it can be administered with advantage all through the pregnancy. In connection with careful judgment, and ordinary hygienic precautions, Hayden's Viburnum Compound can work wonders for the unfortunate class of women who suffer from the abortion habit.

MEDICAL ABSTRACTS.

The Treatment of Phthisis.—Dr. Jesse Shoup (*American Medicine,* October 4th) has lately given the following prescription:

R.

Arsenous acid, 0.65 grm. (10 gr.);
Potassium carbonate, 1.12 grm. (17 gr.);
Cinnamic acid, 1.94 grms. (30 gr.);
Boil with distilled water to make 23.38 grms (6 drm.);

Add

Aqueous extract of opium, 1.94 grms. (30 gr.);
Brandy, 14.17 grm. (3½ dr.);
Distilled water, 56.70 grm. (14½ dr.).

M.

Begin with three drops after lunch and dinner, and gradually increase to twenty drops.

In incipient cases and in chronic cases, without the mixed infection, patients seem to improve rapidly with disappearance of night sweats, lowering of temperature, and gain in body weight. In all acute cases and cases with mixed infection, and when there was great debility, this treatment had to be abandoned, as it seemed to hasten the course of the disease.—*New York Med. Journal.*

Chlorosis, Marriage, and Orchitic Extract.—Dr. W. Dufougere (according to the *Gazette medicale de Nantes* for August 16th, in his essay, *La Chlorose, ses rapports avec le mariage, son traitement par le liquide orchitique,* draws the following conclusions: Chlorosis is due to a self-intoxication of menstrual origin, and to accumulation in the blood of toxic principles which are not destroyed by the internal secretion of the ovary. By reestablishing this internal secretionlessened or absent, chlorosis and its symptoms are caused to disappear. Marriage influences this secretion, and restores it if it has ceased. This re-establishment of the secretion is due to the absorption during coitus of a certain specific principle which acts directly upon the ovary, and stimulates it out of its torpor. Chlorosis, therefore, so far from being an impediment to marriage, is quite the reverse. The ingestion of "orchitic liquid" by chlorotics will also establish this internal secretion. Its therapeutic action is explained by its physiological character, and agrees perfectly with the effect of "marriage" on chlorosis.—*New York Med Journal.*

Treatment of Furuncles.—M. P. Desfosses (*Presse medicale,* July 9th) says that, when it is not possible to abort a furuncle, a prolonged hot bath, when the furuncle is favorably situated, will soon mitigate the pain. Hot compresses of bichloride of mercury, one to 2,000, covered with oiled skin or rubber tissue and changed four or five times daily, will

relieve pain and hasten suppuration. Incision the author regards as the proper treatment when the furuncle has reached its full development. A deep incision with a bistoury or a crucial incision may be made, according to circumstances. As to general treatment, saline purges may be useful, while arsenic, the alkalies, and intestinal antiseptics are recommended. Brewer's yeast, in doses of a teaspoonful three times daily, acts very well and sometimes prevents the formation of new furuncles, but its effect is not always constant. Prophylactically, frequent washings of soap, with alcohol and minute attention to the cleanliness of the skin, are advised.—*New York Med. Journal.*

BOOK NOTICES.

THE AMERICAN TEXT-BOOK OF OBSTETRICS. —In two volumes. Edited by Richard C. Norris, M. D.; Art Editor, Robert L. Dickinson, M. D. Second Edition, Thoroughly Revised and Enlarged. Two handsome imperial octavo volumes of about 600 pages each; nearly 600 text-illustrations, and 49 colored and half-tone plates. Per vol: Cloth, $3.50, net; Sheep or Half Morocco, $4.00, net.

This is a work for the student and practitioner alike. It makes clear those departments of obstetrics that are at once so important and usually so obscure to the medical student. The obstetric emergencies, the mechanics of normal and abnormal labor, and the various manipulations required in obstetric surgery are all described in detail, and elucidated with numerous practical suggestions.

Since the appearance of the first edition many important advances have been made in the science and art of obstetrics. The results of bacteriologic and of chemicobiologic research as applied to the pathology of midwifery; the wider range of surgery in treating many of the complications of pregnancy, labor, and the puerperal period, embrace new problems in obstetrics, some of which have found their place in obstetric practice. In this new edition, therefore, a thorough and critical revision was required, some of the chapters being entirely rewritten, and others brought up to date by careful scrutiny. A number of new illustrations have been added, and some that appeared in the first edition have been been replaced by others of greater excellence.

By reason of the extensive additions the new edition has been presented in two volumes, in order to facilitate ease in handling. The success primarily achieved unquestionably awaits this present edition, as we know of no more commendable work on the subject.

The beauty of the illustrations and typographical appearance, the clearness of the text and the absence of superfluity, all unite to make a book with few equals on this important branch of medicine.

BACTERIOLOGICAL TECHNIQUE. A Laboratory Guide for the Medical, Dental, and Technical Student. By J. W. H. Eyre, M. D., F. R. S., Edin., Bacteriologist to Guy's Hospital, and Lecturer on Bacteriology at the Medical and Dental Schools, etc. Octavo of 375 pages, with 170 illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, $2.50 net.

This book is an excellent one. It presents concisely yet clearly, the various methods at present in use for the study of bacteria, and elucidates such points in their life-histories that are debatable or still undetermined. Moreover, it does not encumber the student with the many uncertain methods usually crowded into books of this kind, only those being included that are capable of giving satisfactory results even in the hands of beginners.

The excellent and appropriate terminology of Chester has been adopted throughout. This is a very commendable feature, as Chester's terminology needs but a trial to convince one of its extreme utility; and its inclusion in an elementary manual is calculated to induce in the student habits of accurate observation and concise description.

The illustrations are numerous and practical, the author considering, and rightly so, that a

picture, if good, possesses a higher educational value and conveys a more accurate impression than a page of print.

The work is not intended for the medical and dental student alone, having been designed with the needs of the technical student generally constantly in view, whether he be of brewing, dairying, or agriculture.

Of the many laboratory guides and technical manuals constantly being issued, this is, without question, for a book of its pretentions, the best that has reached us.

Its price is moderate and places the book well within the reach of all.

NEWER REMEDIES.

THE TEST OF TIME.—If there is a tonic preparation before the medical profession that has stood the test of time better than Fellow's Hypophosphites, we would like to know it. This sterling product of pharmaceutical skill is the mainstay of many a physician's armamentarium and the uniform success obtained by its administration amply justifies the place it fills in modern therapeutics.

Dr. W. R. Smith of Red Level, Ala., says: "I have prescribed Neurilla a great deal in my practice and have found it to act most charmingly. In fact, we have had all the results that were to be expected and shall keep same before us, prescribing it frequently in our practice.

MODERN METHODS.—Progress in the treatment of diseases of women has kept pace with the advances made in general medicine. The physician who subjects a patient suffering from endometritis, vaginitis, leucorrhea, etc., to the disagreeable tamponing of the vagina with boro glyceride, etc., will find her leaving him for the modern and up-to-date practitioner.

Micajah's Medicated Uterine Wafers are astringent, antiseptic and alterative and when inserted into the vaginal canal up to the uterus, slowly disintegrate and offer a treatment for the above conditions which is most effective and satisfactory to the patient and doctor alike. No powder to spill nor water to soil the clothing.

Write Micajah & Co., Warren, Pa., for samples.

I have used Bromidia in cases of insomnia, restlessness and threatened convulsions, with surprising results, finding that a dose of from drops fifteen to one drachm to be sufficient according to age and how often to be repeated. I have combined Bromidia with Papine where I wished to annul pain with excessive nervousness, the combination acting very happily also in bladder troubles. I use Bromidia and Papine very much in my family.

CHAS. E. QUETIL, M. D.

Philadelphia, Pa.

SANMETTO in Enuresis, Irritable, Inflamed Bladder, in Neurasthenia. Also in Endometritis.—Several years ago my attention was called to Sanmetto, and in prescribing same found that it was more grateful to the palate and gave me more satisfactory results than the saw palmetto when prescribed in cases of enuresis, irritable conditions of the bladder, and especially in cases of chronic inflammation of the bladder. As many of the ailments of the kidneys and bladder are sympathetic from neurasthenia, Sanmetto is especially indicated in all cases of nerve prostration. About a year ago a young farmer, married, called on me for treatment. On examination I found that there was severe neurasthenia; he was much emaciated; the urine heavily loaded with earthy phosphates, mucous and pus. I put him on tablets of strychnia arsenite and Sanmetto, with satisfactory results. He is now in fine

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ORIGINAL ARTICLES

ADDRESS ON GYNECOLOGY

By A. Lapthorn Smith, M. D., Professor of Gynecology in the University of Vermont and Professor of Clinical Gynecology in Bishop's University, Montreal.

Cancer of the Uterus.—I have chosen this as one of the topics of my address because I believe that in this field lie our greatest opportunities for saving life at the present time. Our course is not difficult to follow; we have only to place implicit faith in a few axioms and then to act upon them without a single hour's unnecessary delay. The first of these is that "every woman with a lacerated cervix is especially liable to die from cancer, while the moment that her laceration is repaired her liability to cancer becomes very small." It should therefore, be a matter of conscientious duty to explain this to every woman before, or soon after her confinement, so that she will not only consent to, but actually seek an examination. If you can introduce the tip of your finger into the cervical canal, or if you feel a hook on either lip of the os uteri, insist upon having the tear sewed up, or if it is a bad one, amputate the diseased part of the cervix, which can be done by my method without losing an ounce of blood or leaving a trace of the operation, while at the same time making a tear at the next confinement impossible.

I can recollect a great many distressing cases of women who neglected to carry out my urgent advice and who have paid the penalty with their lives, but I will only mention two because they are about to die, and because one of them came to me while I was writing this address. Yesterday a woman came to the Samaritan Hospital in a dying condition, whom I had not seen for fifteen years. She told me that my parting words to her then were, that if she did not have her lacerated cervix sewed up she might die of cancer at the age of forty-five. At that time I never imagined that my words would come true, for the simple reason that I thought she would take my advice and have it done. But unfortunately she consulted another doctor, who told her that it was not necessary to have an operation, and if there was no cancer in her family history, she need have no fear of the disease. This made her happy with a false security, and when she began to flow again at forty-five, after having had the menopause at forty-two, she felt quite pleased, as she considered it a renewal of her youth. When the flow became profuse she consulted her false prophets again and they lost a precious year in giving drugs instead of making an examination. At last she lost faith in them and consulted one of my pupils, Dr. Warren, who insisted upon an examination, and who made the awful diagnosis of cancer of the uterus within five minutes of seeing her for the first time. He sent her in the ambulance to the Samaritan Hospital, but the whole uterus was a necrotic mass which could be scraped away with the fingers, and the broad ligaments were solid. She has only a few days to live.

The other case is a beautiful woman only thirty-three years of age, whom I advised to have her lacerated cervix repaired, two years ago, when I saw her only once. It was not convenient for her to have it done then, but she said she would have it done in a year. Ex-

* Delivered at the 89th Annual Meeting of the Vermont State Medical Society.

actly a year later she called again to have it performed, when I was shocked to find the whole cervix a mass of cancer. Two or three months were lost because the pathological examination was negative, but finally the report came that it was cancer, and the uterus was removed, but too late to save her, and she is now nearing the end.

The second axiom which I beg you to accept is "to consider every woman to be the victim of cancer until you have proof to the contrary, who having passed the menopause, begins to bleed again, either regularly or irregularly. It is only since I and my friends and pupils have begun to rely upon this one clinical symptom that I have been getting cancer cases at a stage sufficiently early to have practically no death rate from the operation and absolutely no death rate after it from the disease. In one week at the Samaritan Hospital I removed three uteri for cancer; the first was sent in by Doctor Smythe and although he made his diagnosis within five minutes of his first seeing her, and her uterus was removed within two days, she is now dying, six months after her operation, because the disease had already extended beyond the uterus when the latter was removed. In the two others who came to the Montreal Dispensary, there was no pain, no foul smelling discharge, no cachexia, only the one clinical symptom, hemorrhage coming on in women past the menopause. In one there was an angry looking little ulcer in the angle of a lacerated cervix, but when her uterus was removed and cut in half through this sore the disease could be plainly seen within an eighth of an inch of the limit of the organ. This woman did not die, nor will she die from the disease; she is alive and well to-day. The other patient did not even have a little sore on the cervix, and my assistants could hardly believe that I would remove the uterus just because she was having hemorrhages two or three years after the menopause, the only other sign present being an enlargement of the uterus to double its size. But I did remove it, and after dissecting it after removal there was the angry ulceration up near the left cornu, from whence the bleeding came, but extending half way through the wall. She is also perfectly well to-day. Now, why wait in either of these cases until the disease has gone beyond the uterus, rendering the primary mortality higher and the ultimate death from the disease sure? The symptom of bleeding after the natural bleeding has ceased is such a serious one that no practitioner of medicine, of average intelligence should overlook it, and having once observed it, no possible excuse should be accepted for not acting upon the hint. Not in a month or even a week, but immediately. Although it may sound paradoxical, it might be put in this way: If you wait until you are sure that the woman has cancer of the uterus, you will be too late to save her; the organ must be removed as soon as there is a suspicion of it, and even then it is late enough. Forgive me if I speak strongly, but this is a chance of a life time, to address such a large and influential body of practitioners, and I feel that I would be shirking my duty if I failed to embrace this opportunity of urging every one here to join the great twentieth century crusade to drive this fell destroyer from our patients' homes.

Another axiom which appeals rather to the prevention than to the cure of cancer is this: cancer of the uterus is not an hereditary, but a contagious disease. I cannot take the time at present to prove this statement, but I assure you that I have proof in my possession which would convince any sane man of the truth of it. It is not hereditary, and if any daughter contracts the disease whose mother died from it, it is because she has infected herself while ministering to her mother's needs. Let us warn those who are attending cancer cases of the danger of spreading it by contact, and above all let us physicians be able to say that we have always disinfected our fingers with bichloride of mercury after examining a cancer

case before we touch another woman. It has been the exception that any of my cancer cases have had parents who died of cancer, and the sooner that its heredity is exploded the better.

These remarks apply to a large extent to cancer of the breast; I have operated for this condition about twenty-five times and although some of these operations were very extensive, I have had the good fortune not to lose one from the operation. Of those from whom I removed the breast early, just because there was a hard lump in it, and the nipple was retracted and the woman was about forty, every one is still alive after five, ten and even twenty years. But of those in whom we waited until there was the additional evidence of enlarged glands in the axilla, although all recovered from the operation, not one was alive after two years, notwithstanding that I removed the pectoralis major and minor muscles, and every vestige of fat and lymphatics from the axilla. Many of the doctors who sent me these patients told me they would have sent them to me much earlier, but they were waiting until they were quite sure that it was cancer. No wonder then that I am opposed to this waiting, since at the end of it, the operation does no good. At a recent discussion of this important subject before a well-known medical society, the opinion expressed by all the most experienced surgeons was that every breast with a lump in it should be removed, if the woman was nearing forty, as even benign growths frequently become malignant at that age.

Lacerated Cervix.—Let us now leave this unpleasant topic of cancer for a time, and take up the important question of lacerated cervix. Most of those whom I am addressing attend confinements, and I sympathize with them in the trials and difficulties which this branch of their practice entails. What are you to do when you are summoned to a confinement ten miles away from your home, and when you get there you find that labor has only begun, or the os uteri only open the size of a half dollar. If you put on the forceps and finish the labor up, you will surely tear the cervix, and if the woman is a primipara, the perineum as well. It would be far safer to either give her a little opium and go away, to return when sent for, or else remain there for from ten to twenty hours until the os was fully dilated, making a just and righteous charge of so much an hour for the time you give up to her. If you go away leave directions with the nurse in case the baby should be born before you arrive, that absolutely nothing must be done beyond lifting the child's mouth out of the water, and if the cord is twisted around its neck to untwist it. The cord must not be tied or cut nor the woman touched by any one but the doctor. You can explain to the woman when she engages you that no harm will come to her or the baby if she leaves it there for an hour or two, and allows no one to touch her until you come. I have followed this plan many a time and have never seen anything but benefit to the mother come from it. People can be educated to anything, and why could they not be educated to pay for a doctor's time as well as anybody else's? Our present method of charging so much for the confinement and attendance irrespective of distance or the difficulties of the case, or the time consumed in doing the woman justice, should be revised. The fee should be made up of a reasonable charge, first, for the confinement, including an hour's time; second, for transportation at so much a mile if you use your own vehicle; third, so much an hour for all the hours you are away from your office, including visits; fourth, for the anaesthetic and other necessary medicine. If this method were adopted throughout the State it would be easy to educate primiparæ not to send for the doctor until they have been twenty-four hours in labor at least, instead of calling him at the first pain, as was done by many of the women on whom I have operated for the most extensive tears.

Let us now lay aside the question of prevention and turn to the repair of lacerated cer-

vix. Many of these are long and conical to begin with, and when they are repaired by Emmet's method they are exceedingly liable to be lacerated again. The thought of this possibility deters many young child-bearing women from having it sewed, and I must say that I have noticed a more prolonged and painful first stage of labor in the women on whom I have done an Emmet's operation. Only by giving opium so as to prolong the first stage have I avoided a second laceration; I have therefore since two or three years been amputating all these club shared hypertrophied cervices by an almost bloodless method. It consists in making an incision just back of the diseased surface on the cervix like the first step of vaginal hysterectomy and pushing back the mucous membrane, catching up any little bleeding points. The uterus is then drawn out until you can feel the base of the broad ligament, which you tie with a single stitch on each side. Divide between the ligature and the uterus, when there will be no difficulty in drawing out and cutting off so much of the cervix as will leave the remaining uterus two and a half inches long. In some cases this means removing four inches of diseased and lacerated cervix. Then the mucous membrane which has been detached is reunited to the cervical canal with two stitches above and below and the remaining slit on each side is closed by a fine running catgut suture. I have examined several of these cases two months later and could hardly tell that they had ever borne a child.

Another direction in which we might save many more lives than we do if more attention were directed to it, is in that of tubal pregnancy. Many women die every year from it, and they might all be saved if the condition were recognized earlier and removed. It has been my good fortune to have operated on 23 of these cases, all of whom recovered, although some of their abdomens contained more than a gallon of blood, and some of the patients were quite unconscious when brought into the hospital. About a third of these cases were discovered by myself, the rest were sent to me by former pupils and young practitioners whom I had trained to be on the lookout for them. Lawson Tait said that it was impossible to diagnose a tubal pregnancy before rupture and that was doubtless true at that time, but since then, practitioners are looking out for these cases all the time and so they are discovered much earlier. More than half of my cases were operated on before rupture. It is true that my friends and I have made a mistake sometimes; we have diagnosed a tubal pregnancy when there was only a pus tube; but it was a good mistake to make, for next to a tubal pregnancy, a pus tube is one of the most dangerous things a woman can have in her abdomen. In fact I feel safe in saying that in view of the possibility of these two conditions being present, no practitioner should rest content until he is able to say in any given case whether there is a mass in the pelvis or not; and if that mass does not disappear after a good dose of castor oil he is safe in advising the removal of it as soon as possible. As you all know, the death rate of abdominal operations is coming down steadily year after year. But all the credit of this improvement is not due to the increased skill of the operators; a fair share of it must go to the general practitioners who discover these diseases much earlier, before the pus tubes and tubal pregnancies have ruptured and before they have become adherent to the bowels and abdominal walls. It is now very rare for me to see a two or three gallon ovarian cyst, such as were common twenty years ago, simply because the general practitioner even in the most distant country place detects them and urges operation long before they get big. It is a mistake to think that we should wait until we can tell to a nicety whether a mass which we feel is a round celled sarcoma or on the contrary a carcinoma of the ovary; that is useful and interesting to know after the woman's life has been saved by its removal; but in the meantime let us get the tumor out and save the woman's life. My ex-

perience with pus tubes illustrates this well; some were seen too late for any operation and the woman died; some were seen after rupture and about half of them died, the rest being saved by an emergency operation; others were seen after years of suffering from recurrent attacks of the pelvic peritonitis and made desperate cases with a mortality of 20 per cent.; pus pouring into the rectum, bladder, ureter, vagina or through the skin of the abdomen. Others, an ever increasing number, were operated upon soon after their first attack of pelvic peritonitis and nearly all recovered. So that the death rate from pus tube operations which is nearly 10 per cent. on an average, could, I am sure, be brought down to less than 5 per cent. if it was the unanimous opinion that abnormal masses in the pelvis should be removed soon after their discovery.

As the reader of the address, I am allowed considerable latitude in dealing with my subject and I have taken advantage of the opportunity to draw your attention to a few points in which I thought there was most room for improvement in our present methods of deali: with them.

MEDICO-LEGAL AUTOPSY.*

By M. J. Wiltse, M. D., Director of Laboratory of Hygiene, Burlington, Vt.

I do not promise to give you anything particularly original, but from recent experiences, I think it may be well to review, in a way, at least, to freshen our memory on the little things which are so easily forgotten and which are of great importance in connection with a medico-legal autopsy. This entire paper is made up from Witthaus and Becker, Delafield and Prudden, and notes from the lectu:. late Dr. Jo H. Linsley.

A medical examiner before proceeding with an autopsy, especially if called before the body has been removed from the place where it was found, should carefully note certain facts. These should be entered by him or an assistant, with great care, in a note book, as this book can be introduced as evidence in any trial. A satisfactory way is to dictate to the assistant as the examiner proceeds, at the conclusion, the assistant reads the notes taken, the examiner verifies them, and in turn these are signed by the examiner, his assistant and others that may be present.

The only difference between a medico-legal and a pathological autopsy is that in the former case everything which might subserve the ends of justice should be carefully noted, and the changes found most accurately described, especially any abnormality found in the external examination. The method of the examination will be governed by the case in question. The object may be to determine whether a person has died from violence or poisoning, to establish the cause of death, especially if it has been sudden, or to ascertain the lesion of a disease or to confirm a diagnosis; in any case, the examination should embrace all the important parts of the body, not merely the suspected organs.

In endeavoring to ascertain the cause of death, with the aid of clinical history or otherwise, the greatest care is necessary. Many of the lesions which we find after death indicate rather the ravages of disease than the cause of death. Who shall say how great a degree of meningitis or of pneumonia or of endocarditis or of cirrhosis or of nephritis, necessarily caused death? It must often be acknowledged that no sufficient cause of death can be found, but the more accurate and careful the examination (especially when a microscopical examination of the organs is made), the fewer will be the number of such cases. If no apparent lesion is found, it must not be forgotten that many poisons destroy life and leave no trace that the pathologist can discover; again, there are cases recorded wherein the chemist has failed to isolate the poison which may have caused death.

* Read at the 89th Annual Meeting of the Vermont State Medical Society.

When one undertakes an autopsy, they never know where it will end, therefore the greatest care is necessary. Sudden deaths of persons who have apparently been in good health up to the time of death are often particularly obscure. This again suggests the most thorough inspection and the recording of the most minute detail.

Before commencing, one should not forget to examine surroundings; position of the body, providing it has not been moved since finding; one should almost assume the role of a detective. The minuteness of inspection will depend upon the character of the case.

It is well to note the character of the soil, condition of the ground, foot prints, if so, their direction, evidence of any struggle, presence of a weapon, and the exact position in which the body lies, especially the position of the hands and feet. This is important, for the body may be found in a position which the deceased could not have assumed on the supposition of the wound or injury having been accidental or homicidal. If the body be found in the water, examine the character of the water and temperature, if near the shore, the character of the soil.

In the case of an unknown person or of one suspected to have died from unnatural causes, it is necessary to describe the person, physical appearance, and to preserve the clothing in so far as possible, examine closely for stains (blood and others).

The situation of the blood stains and their number and extent on clothing or surrounding objects should be noted. This will often show whether a struggle has taken place after receiving the fatal wound, and is also of medico-legal importance if made at the time the body is found, for it may be so situated as to show that the body has been interfered with after death.

Again, spots of blood found upon articles of clothing or upon surrounding objects should be noted as to their form and direction, for they may serve to furnish an indication of the position of the person with respect to them when the wound was inflicted. For example, if the spot was oval, the presumption is, that the person was placed obliquely with respect to the stain while the hemorrhage was occurring. The force with which the blood was thrown out will in some measure be indicated by the obliquity or length of the spot. The amount of blood will also indicate whether the person has died suddenly, the exact spot where death occurred, whether a struggle took place, and will also preclude the possibility of a person moving after receiving the fatal injury. When we examine a body, especially when found in a room, care must be taken not to be misled by the accidental diffusion of the blood by persons going in and out, or touching the body.

The examination of the clothing should be thorough. A description of each article should be noted and the order in which it is removed, for often it is important to prove that the garments were worn by or belonged to the deceased. If any blood is on the clothing, note whether in large patches, or whether it is sprinkled over the garment, the amount and what garments are stained by it. Note and examine whether the blood has flowed down the front of the clothing, whether it has soaked the inner garments, or again whether it has collected along the back, for these appearances will sometimes demonstrate whether a wound was inflicted while the person was sitting, standing or lying down. For example, if the throat is cut while the person is lying down, the blood will be found on each side of the neck along the back, and not down the front of the body. Few suicides cut their throats in a recumbent position and this distribution of blood may serve to distinguish a suicidal from a homicidal wound.

The condition of the clothing may also serve to show whether there has been any struggle and the presence of dry spots or mud on it may sometimes serve to connect an accused person with an act of murder.

If there are several stabs or cuts on the body

involving the clothing, it should be noted whether they are blood stained, and if so, whether the stain is on the inside or outside of the garments, for sometimes in simulated personal injury, a stain of blood may be inadvertently applied to the outside of the clothing, as in wiping a weapon.

If a weapon is found, its character and exact position should be noted. This is frequently of importance in telling whether a person had died from an accidental or self-inflicted wound. Note whether the weapon is sharp or blunt, straight or curved. If a knife, the handle and inner portion should be examined, for the blade may have been washed. If the wound has involved any large vessels, it is improbable that the weapon could have been thrown any distance from the body and when it is, there are always fair grounds to expect interference with the original position of the body. One circumstance which always strongly points to suicide is the finding of the weapon firmly grasped in the hand of the cadaver. The hand of a dead person cannot be made to grasp or retain a weapon as does the hand which has grasped it at the last moments of life. The amount of blood on the weapon should be noted, but it must be remembered that a knife may have produced a fatal stab wound and still no blood be found upon it.

When a person has died of a gunshot wound —especially at close range—it is important to examine carefully direction of wound, look for wadding and powder marks. Having completed the examination of the surroundings, and taken every precaution towards identification, one may proceed.

After the removal of clothing, search closely for and record all contusions, wounds, etc., their size, situation and condition, whether anti-mortem or post-mortem, also deformities and physical peculiarities of hair, eyes, moles, etc., by which the person may be identified; note carefully the relative size of the pupils of the eyes. If possible it is well to photograph, weigh and measure the body. There is great variation in the weight of individuals within the limits of the normal, but these averages may be useful in estimating the relative weight of the single organs. Note the general nutritive condition of the body, look for evidences of external injury, for skin diseases, fractures, burns, scars, tattoo marks, odema, gouty deposits, ulcers, abscesses, enlarged lymphatic glands, etc. The external genitals should be very carefully examined for the presence of injury or syphilitic cicatrizes. In medico-legal cases the hands of the dead person should always be examined for the presence of cuts, excoriations or foreign substances upon them.

To give any value to the presence of rigor mortis, it is necessary to note the nature of the substance upon which the body is lying,—whether the body is clothed or naked, young or old, fat or emaciated. These conditions materially influence the rapidity of cooling and the onset of rigor mortis, on the average this takes place after about six hours, and in whatever position they may have been at the time of its occurrence. It usually begins in the muscles of the eyelids, extends to the back of the neck and lower extremities. It usually disappears in the same order, although commencing on the average six hours after death, it may set in almost instantly or it may be delayed for twenty-four hours or more. It may pass rapidly, rare cases one to three hours, or it may persist for two or three weeks. In general, it disappears within twenty-four to forty-eight hours, depending upon the conditions.

It may be well to mention at this time that if a chemical analysis of the various organs and tissues is to be made, and it is impossible to have the chemist present (which is preferable), the medical examiner should obtain some new glass jars of suitable size with close fitting glass covers, and in them the various organs are to be placed if possible with no preservative. Great care is to be taken that the organs touch nothing in removing from the cadaver to the jars. If impossible to deliver at once to the chemist, alcohol may be poured

over the organs in the jars, but it is especially important that a sample of this alcohol should be retained that the chemist may at a future date test the same for any impurities. After the organs and tissues have been placed in the jars, the mouths should be closed and sealed, the seal to remain in the custody of the examiner until the jars are delivered to the chemist. In cases of suspected poisoning, it is not sufficient that the stomach and intestines alone should be preserved for the chemist, for it should be borne in mind that the portion of poison remaining in the alimentary tract is but the residue of the dose which has been sufficient to destroy life, and if the processes of elimination have been rapid, no trace of the poison will be found in the alimentary canal, but can readily be detected in other organs. Again the poison may not have been introduced by the mouth, in which case none may be found in the digestive tract. The chemist should receive besides the stomach and entire intestinal canal, the liver, one or both kidneys, the spleen, a piece of muscle from the leg, the brain and any urine found in the bladder. When it is impossible for any reason to obtain the whole of any organ, the part removed should be carefully weighed and its proportion to the rest of the organ noted. It is also of extreme importance to preserve sealed and labelled, jars containing those parts of the body which may show the evidence of disease or on the appearance of which one's evidence is founded. As all are conversant with the anatomy of the organs and considering the amount of time devoted to minor detail, I will only briefly mention the internal examination. The method should be such as will enable us to examine the relations of parts to one another, without seriously disturbing them and to remove and inspect the organs in such order and manner as will not interfere with the examination of the parts which are to follow.

In medico-legal autopsies, the great cavities, the head, the thorax, and the abdomen, should be examined in their successive order from above downwards. The reason for beginning with the head is that the amount of blood in the organ and its membrane may be determined more accurately. Remove the calvaria and examine carefully the dura and pia maters, note the degree of congestion, existence of pus or blood and the amount of serum.

Remove the brain and examine the arteries at the base for atheroma, thrombi, emboli and aneurism; examine the pia mater of the base, especially for evidences of hemorrhages, tumors, tubercles, and inflammatory lesions; open the brain and examine its cavities and internal structure; note the conditions of the ventricles, the floor of the lateral ventricles is the most frequent spot of hemorrhage; if one is found, note the extent.

In opening the thoracic and abdominal cavities, the incision should extend from the top of the sternum to the pubic bone. A superficial examination of the abdominal cavity should be made before opening the thorax. Note the relative position and general condition of the organs; the color and amount of blood in the presenting parts; whether there are any signs of inflammation, foreign bodies or tumors. Examine the vermiform appendix, the amount of fluid present and its character. Look for perforations, invagination and hernia of the intestine, and determine the height of the diaphragm on both sides. Determine the presence or absence of gas in the plural cavity; this done, open the thorax in the usual way, that is, sever the sterno-costal cartilages close to the end of the ribs, disarticulate the clavicle at the sternum and remove the piece thus disengaged. Observe the position, color and degree of distention of the lungs, examine for adhesions, amount of fluid and its condition. Open the pericardium, note the amount and appearance of the serum, examine for adhesions. Pass the hand over the arch of the aorta and examine for aneurism or dilatation. Remove the heart, note whether the blood is in the right or left heart. Examine the valves either by the "water test," "finger test" or by actual measure-

ment; open the cavities and better examine the valves, look for clot and note whether ante-mortem or post-mortem; careful examination of the coronary artery is important: after removal of the blood the heart should be weighed. As before stated it is well to weigh all the organs. Remove the lungs and examine externally shape,color and consistency; open the bronchi, continue the incision into the pulmonary substance along the minute bronchi; note the mucous membrane and contents of bronchi, color of the lung substance, note whether the alveoli contains blood, mucus or inflammatory products; examine carefully for the presence of millary tubercles. At this point a ligature should be placed about the oesophageal opening of the stomach. The tongue, trachea and oesophagus should then be removed and examined for evidence of inflammation, caustic poisons, tumors, foreign bodies or strictures. Examine larynx and trachea for evidence of oedema of glottis and note condition of mucous membrane.

Having completed the examination of the organs of the thorax, proceed with the abdominal cavity. Dissect off the omentum, noting if abnormally adherent. The first organs to be removed are the kidneys. These are to be examined carefully, note size, color and weight; there is some difference of opinion concerning their weight. I have a record of seven hundred and seven autopsies at a certain hospital, which show the average weight of the right kidney to be 5 ounces 3 drams and the left to be 5 ounces 4 drams 6¾ grains. Some of the kidneys were nephritic while others were apparently normal, therefore, we may safely state the weight of a kidney to be from 4½ to 6 ounces. Note the degree of adherence of the capsule and the surface of the organ, the cortex, the pelvis, the degree of congestion, and note carefully the markings.

The spleen should now be examined. Its size, color and consistency should be noted, as well as the presence of any tubercles or tumor. Next in order is the examination of the stomach and intestines. We are all familiar with what should and should not be found here and inasmuch as this is a medico-legal case, I will simply say that unless the chemist is present, the medical examiner should not open the stomach or intestines; great care is to be exercised in their removal. Double ligatures should be placed about the end of the duodenum, at the end of the ilium and at the lower portion of the rectum, one having already been placed about the oesophageal end of the stomach when removing the oesophagus. The jejunum and ilium should first be removed by cutting between the ligatures, then caecum, colon and rectum, lastly duodenum and stomach. These should be placed in jars and sealed at once.

Only in this way can an absolute knowledge of the character of the stomach contents be obtained, which is of much importance in certain medico-legal cases.

The stomach and intestines having been removed, the examination of the liver and pancreas are next in order. The entire liver should be delivered to the chemist. The genito-urinary organs should have a most thorough examination. In no case should you omit to catherize and preserve the urine for examination by the chemist.

Lastly the spinal cord should be removed and closely examined for hemorrhages, inflammatory lesions, tumors, softening; after the removal of the cord, examine the vertebral column for the evidence of fracture and displacements.

This would be a good time to go home, but unfortunately that which remains must be made presentable for burial. In conclusion, I can not refrain from again calling your attention to your notes; have the assistant read them over carefully for corrections (there are sure to be some), then having signed them yourself, obtain the signatures of all others present. Your report should be clear and concise and the language such as a coroner's jury can understand. Technical terms should be avoided as much as possible. A copy of the findings and your con-

clusions should be forwarded to the chemist.

Two years ago December next, examinations of materials from this class of cases were included in the work of our Laboratory (no other State Laboratory in the United States undertakes this class of work on a yearly appropriation), consequently a variety of material from man and beast has been received for chemical analysis, ranging anywhere in amount from 20 m. to a pail full. Of the thirty cases received, but a small percentage would stand a court trial. Few stop to think just what "examine for poison" really means, nor do they consider the amount of time required for these examinations.

CEREBRAL APOPLEXY.*

By J. W. Jackson, M. D., Barre.

In selecting this subject for my paper, I have done so, not with the expectation that I shall bring out any new ideas, or from any intimate personal experience with the subject, but I am in hopes that the discussion to follow may give us all some new points on a very interesting and rather frequent occurrence, with which the general practitioner comes in contact.

I intend to take the term in its widest sense and include any condition, due to arterial causes, whether hemorrhage, thrombosis or embolus, because the site of the lesion is usually the same and impairment or destruction of the function of these brain areas gives the same later symptoms, only the early symptoms and the nature of the beginning of the attack differentiating them.

Apoplexy is a term usually applied to coma coming on rapidly, as a result of cerebral hemorrhage. It is caused by a rupture of the lenticulostriate artery. This artery is the largest and most important branch of the antero-median group of the ganglionic system, which system embraces all the branches arising from the Circle of Willis.

Its couse is upward between the lenticular nucleus and the external capsule, it then turns inward through the internal capsule and terminates in the caudate nucleus.

In adults the most common seat is in the internal capsule, but a hemorrhage may be into the meninges and very rarely extends into the cerebellum. Apoplexy is more frequently met with in the old than in the young, owing to a degenerative and atheromatous condition of the blood vessels, set up by predisposing causes of long standing, such as gout, rheumatism, syphilis and any other condition leading to sclerosis, for in all cases, outside of embolus, we have to deal with arterial disease, without which condition no amount of strain would be likely to lead to a rupture of the blood vessels.

The etiological factors, therefore, usually found as entering into the cause of apoplexy, are atheroma of the cerebral vessels, as well as throughout the body, leading to sclerosis of other organs, especially of the kidneys and liver, and there is usually hypertrophy of the heart, especially the left ventricle.

Interstitial nephritis is present in most cases when the subject is over fifty years of age, and should be carefully sought for, even though there is absence of albumen and casts. A persistent low specific gravity is a most suspicious indication of arterial degeneration. These changes are slow and insidious, varying according to the habits of the patient, whether he is in the open air, takes exercise, controls his appetite for food and drink, and generally conduces to a slow or rapid outbreak.

Two other factors have a marked influence on cerebral apoplexy: they are alcohol and syphilis. If alcohol is taken in quantities beyond a point where the system can consume it, there results either an atheromatous condition or fatty changes in the blood vessels.

This is more likely to occur in persons who are habitual, steady drinkers, of sedentary habits, than in the excessive periodical drinkers. Many of these are unaware that they are using daily so much alcohol and taking into the system a poison, which their method of living never allows them to throw off.

* Read at the 89 h Annual Meeting of the Vermont State Medical Society.

Syphilis is certainly still more marked in its effects on the body, especially on the nervous system, and in its secondary effects distinctly shows itself in the brain. In the tertiary stage it has a direct influence on the fibrous tissues, causing fibrosis, which leads to inflammation of the arterial walls, producing thickening of the vessel walls and occasionally a gummatous infiltration in the muscular coat and a narrowing of the lumen. As a result, aneurism with hemorrhage may occur or else a slow occlusion by thrombosis.

We will now consider the symptoms of a typical case of hemorrhage or embolus. The onset is usually sudden, accompanied with loss of consciousness, coma, stertorous respiration and hemiplegia. If due to extensive hemorrhage the coma is profound and lasts several hours, with a subnormal temperature and a full and incompressible pulse; if due to embolus the coma is less profound and usually short in duration, and the pulse shows little change.

In thrombosis, the loss of consciousness is slow, increasing as the occlusion becomes more complete, the patient often being able to notice the spreading of the paralysis; and again, there are occasional cases, where the consciousness is not affected, the paralysis and mental confusion being the only symptoms. If the lesions occur in parts of the brain remote from the motor areas, we may have symptoms of a still different type, as shown by altered emotional state, automatic crying or laughing, loss of memory, of time, of place and surroundings, the patient often insisting that he is in another house or room, although surrounded by his own personal effects with which he has been familiar for years.

But the usual symptoms are paralysis of the lower part of the face and of the arm and leg, impairment of speech, either by loss of memory for names of articles, difficulty of articulation or motor aphasia; there may also be word deafness and word blindness. The face is usually flushed, lips blue, often twitching of the extremities, respiration snoring and a sputtering of the lips on expiration. The affected parts are rigid and if raised and allowed to fall, fall heavily; the urine and feces may be passed involuntarily. If the hemorrhage is not extensive enough to produce grave pressure symptoms, consciousness is gradually restored and the paralysis is only partial, involving only one side of the body, the muscles of the face and thorax usually escape.

The prognosis depends upon the seat and extent of the hemorrhage. A cortical hemorrhage, if in a young person, may subside without leaving serious sequels behind. The hemiplegia following a rupture of the artery into the internal capsule is usually permanent. If there is no improvement in the paralyzed member before the first month, contracture is sure to arise and should the clot not be absorbed, there may be great danger to the higher brain functions, with consequent loss of memory and the different forms of aphasia.

The treatment of an attack of apoplexy is to put the patient immediately to bed, making no attempts to arouse him, by shouting at and shaking him, and enjoin absolute rest and quiet. It is a good plan to slightly elevate the head and turn to one side to prevent the tongue from falling back into the throat asd closing the glottis. An ice-bag to the head may prevent further hemorrhage. If the pulse is full and bounding it is quite proper to bleed through the veins, that is to administer aconite, but the use of the lancet is not advised. If there is evidence of collapse, whiskey, strychnine and digitalis are called for.

If it is possible to make the patient swallow, the first thing to be given is one drop of croton oil with five grains of calomel in a little glycerine. Small quantities of peptonized milk, beef broth and light soups every three or four hours as soon as deglutition returns, or if necessary, the rectal feeding of peptonized milk may be resorted to.

Care must be taken that the normal amount of urine is passed; if not catheterization will be

necessary. Early precautions to keep the patient clean will go far toward preventing bedsores, and turning the patient gently from side to side may lessen the tendency to congestion of the lungs. Bromides and the various cerebral sedatives will be necessary to control the restlessness.

Later conditions will arise, after six or eight weeks, when all symptoms of irritation have disappeared, requiring other methods of treatment, the galvanic current over the affected muscles for 15 or 20 minutes every two or three days to relieve the contracture, as well as massage and passive motion must be persisted in, and if recovery or only improvement should take place, the physician can do much in guarding against those things which will tend to a subsequent attack, which is quite likely to follow sooner or later.

NEWS, NOTES AND ANNOUNCEMENTS.

THE MALTINE PRIZE ESSAYS.—The two prizes of a thousand dollars and five hundred dollars which the Maltine Company offered last January for the two best essays on "Preventive Medicine" have been awarded by the judges, Dr. Lewis of New York, Dr. Reed of Cincinnati and Dr. Rhodes of Chicago, who met for a final consultation in Buffalo. A facsimile of their letter of award is enclosed herewith.

Two hundred and nine essays were submitted in competition, and, although nearly every State in the Union was represented in the contest, both prizes were won by Philadelphia men.

The thousand dollar prize was awarded to Dr. W. Wayne Babcock, 3302 North Broad street, Philadelphia. His essay is entitled, "The General Principles of Preventive Medicine," and was submitted under the nom-de-plume "Alexine."

The five hundred dollar prize was awarded to Dr. Lewis S. Somers, 3554 North Broad street, Philadelphia. His essay is entitled "The Medical Inspection of Schools; a Problem in Preventive Medicine," and was submitted under the nom-de-plume "Broad."

The two successful essays will first be published in representative medical journals, and then in permanent form for gratuitous distribution to the profession at large.

The following tabulation will undoubtedly prove of interest to our readers. It shows how the various sections of the country were represented in the competition:

Alaska,	1	Nebraska,	2
Arkansas,	1	New Hampshire,	1
California,	6	New Jersey,	4
Colorado,	4	New York,	22
Connecticut,	5	North Carolina,	1
Dist. of Columbia,	3	Ohio,	11
Florida,	5	Oregon,	1
Georgia,	5	Pennsylvania,	25
Illinois,	15	Rhode Island,	1
Indiana,	11	South Carolina,	2
Iowa,	8	Tennessee,	1
Kansas,	2	Texas,	2
Kentucky,	3	Vermont,	1
Louisiana,	2	Virginia,	1
Maine,	4	Washington,	3
Maryland,	2	West Virginia,	2
Massachusetts,	12	Wisconsin,	10
Michigan,	7	Ontario,	2
Minnesota,	7	New Brunswick,	1
Mississippi,	1	Unidentified,	5
Missouri,	5		
Montana,	2		209

The report of the Committee of Award is as follows:

BUFFALO, Oct. 18, 1902.

To the Maltine Company, New York.

Gentlemen.—Your Committee selected to award the two prizes offered by you for essays on Preventive Medicine, or some subject connected therewith, begs leave to report that the large number offered in the competition (being two hundred and nine in all), and the general high grade of their excellence, has made the matter of selection very difficult. After critical

examination and mature deliberation, however, your Committee has awarded

The First Prize to the essay entitled "The General Principles of Preventive Medicine," signed "Alexine," and

The Second Prize to the essay entitled "The Medical Inspection of Schools; a Problem in Preventive Medicine," signed "Broad."

In submitting this report the Committee congratulates you upon the widespread interest which you have aroused in the very important subject of Preventive Medicine, and it congratulates the medical profession and the public upon the great good that will follow the publication of the valuable addition to literature thus evoked by your enterprise.

Respectfully submitted,

DANIEL LEWIS,
CHARLES A. L. REED,
JOHN EDWIN RHODES,
Committee.

Burlington and Chittenden County Clinical Society.—A regular meeting was held at their rooms, 162 College street, Friday, Oct. 31, 1902, at 8.30 P. M. The following programme was rendered:

Gall Stones and their Treatment,
Dr. J. B. Wheeler.

Discussion opened by Dr. P. E. McSweeney.

General discussion and report of cases.

Dr. Wheeler's paper was very interesting, and was followed by extended discussion. The attendance at this meeting was the largest of the year.

Prostatic Enlargement.—John B. Murphy (*Northwestern Lancet*) recommends the use of sodium phosphate, hyoscyamus, kava kava, triticum repens and uva ursi, along with rectal injections of hot saline solutions and sitz-baths. Jas. R. Hayden strongly favors a conservative palliative treatment, consisting of strict dieting, assisted by urotropin in full doses to render the urine alkaline.

Genius and Disease.—It is a peculiar fact that the letters and other writing of DeQuincy, Carlyle, Darwin, Huxley and Browning, liberal as they are with references to the continued ill health of those great writers, have not before this suggested to the medical profession an opportunity for research into the causal factors of those physical conditions. That the opportunity has not until now been recognized in its proper light is evidenced by the hitherto total absence of any work dealing with this subject. Dr. George M. Gould's Biographic Clinics (P. Blakiston's Son & Co., Philadelphia), which is devoted to this neglected subject should, therefore, prove a most unique and valuable contribution to biographical and medical literature. The work is announced for publication in December.

Dr. Gould has gathered from the biographies, writings and letters of the five named men, every reference to their ill-health. Each endured, as is well known, a life of suffering which made almost every day a torment and by which their work and worth as an asset of the nation and civilization was conditioned and often rendered morbid. The cause of their affliction was an utter mystery to their physicians. No explanation explained, and no cure cured. Dr. Gould has gone into the "why" of this very thoroughly and the conclusion reached by him, from logic and from a careful summary of the clinical symptoms, is that each of the writers suffered from eyestrain, and that scientific correction of their ametropia would have transformed their livesof misery into livto of happiness. A history of the discovery of astigmatism and eyestrain, with a discussion of its indications and responsibilities, completes the work. It is interestingly written, and will undoubtedly meet with a ready sale among medical men and those interested in the works and lives of the quintette of great writers.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

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BURLINGTON, VT., November 25, 1902.

EDITORIAL.

PROGRESSIVE VERMONT. — Vermont has again taken her position in the vanguard of progress and the passage of the two tuberculosis bills referred to in our last month's editorial is a source of great satisfaction to those who have at heart the sanitary welfare of our State.

At the present time there are four States and four cities that make the notification of tuberculosis obligatory, and five States and five cities in which the reporting of cases is optional. That Vermont is one of the four States who have stepped to the front and made the notification of tuberculosis obligatory is a high testimonial to the intelligence of her law-makers and people.

The creation of a Tuberculosis Commission is also of great importance and the prospects are bright for the early establishment of a State Sanitarium for Consumptives. Thus again will Vermont show her humanity and progress, and give new reason for pride on the part of the citizens within her borders.

Those who have been instrumental in the passage of these laws deserve much commendation and they should derive much satisfaction from having been identified with a movement that is bound to mean so much to the health and honor of Vermont.

THE PLAGUE IN CALIFORNIA.—We are in receipt of a communication from Dr. Gardner T. Swarts, secretary of the Conference of State and Provincial Boards of Health of North America, relative to the plague question in San Francisco. It seems that there is considerable indignation felt throughout the United States and Canada at the remarkable way in which the health authorities of California have met, or rather failed to meet, the situation. We understand that there are many differences of opinion in California as to whether the Bubonic Plague actually exists in that State or not, but those who have been brought into the controversy, and who are best able to speak with scientific authority, are united in the opinion that the presence of plague cannot be disputed. There have been reported in all, eighty-six cases, of which number thirty have occurred since July 13, 1902. Now, no matter what the disease may be, it is certain that no effective steps have been taken to restrict its spread, or stamp it out. The error of this must be apparent, for as long as a single question can arise as to its exact character, no sanitary measure however stringent should be neglected, not only for the protection of the people in California, but for those throughout the whole United States. That such active steps have not been taken is a disgrace to California, and the united voice of all health authorities throughout the country should be raised in deprecating the senseless way in which the civil authorities have treated the whole question.

Politics have undoubtedly played an important part in the matter, and it has gone so far that all physicians holding public places in California who have admitted the presence of plague, have been removed and their places have been filled by men who would voice the opinion of those who appointed them. Such a state of affairs cannot exist without arousing the indignation of every thinking person, and we feel, as has been suggested, that it is high time that the United States authorities, through the Marine Hospital service, stepped in and

took active charge of the whole matter. The State authorities have shown themselves either woefully incompetent or wilfully negligent.

THE AMERICAN YOUTH AND THE DEGENERATIVE TENDENCIES OF WEALTH.—The *New York Journal and American* has the faculty of "calling a spade a spade," and telling the truth under all circumstances. For this it has been maligned without reason and called the yellowest of the yellow. But it is the newspaper that DOES and SAYS things, and if being fearless, honest and wide-awake is the result of being "yellow," there is more virtue in the color than we ever dreamed of.

In a description of the recent Horse Show in New York city, Vance Thompson has the following to say in the *Journal* in regard to the American Woman and the American Youth:

"Now, the American woman is beautiful. There is no getting away from that fact. She dresses as well as her sister of Paris. She has, too, a fascinating alertness—a play of eyes and lip—that no other woman has. In a word, she is insolently, gaily and persistently feminine.

There is, however, a defect in the male of the American species. In fact, there are a score of them. It was evident enough last night; indeed, it was pathetically evident.

There were long lines of boxes filled with women who looked as though they were hybrids of white roses and champagne. Scattered among them were the men—weedy, sheep-faced lads, old men with whiskers, middle-aged men who promenaded their deformed stomach to and fro amid the white girls, men of every stage and age of uncomeliness.

Now, this was at once sad and absurd.

There is no reason on earth why we shouldn't breed a better kind of millionaire. The thing can be done. You have only to look at the clean-bred horses of the millionaires to see what can be done by judicious breeding and early training.

The finest harness horses in London and Paris are sent over from America; they have that strain of the lean trotter in them which makes them invaluable, and in addition they have been educated from birth and have never been "broke."

It would be worth while trying that on the American millionaire. In these days he is quite as important a figure in our social economy as any other. While it might not be possible to interfere with his pedigree, there is no reason why he should not be caught young and trained.

The main defect of the American male of the Horse Show species would seem to be that he is deformed from overfeeding. If the masses get drunk, as unfortunately they do, the classes eat too much. Nor is it pleasant to see them thrust in between those flower-like women in white—it spoils the picture."

* * * * * *

"'Tis true 'tis a pity
And pity 'tis, 'tis true."

The American woman of wealth and refinement, as well as many of her humbler sisters, is the highest type of femininity the world has ever seen. With the women of France she stands supreme. We do not mean the women who are wrestling with economic questions, nor those who are living the "strenuous life" generally. But we do mean the lovely women who are filling their legitimate places in the home and social life of our country. They are ambitious to look well, dress well and creditably fill their places as mothers, wives and sweethearts. This is an honest ambition and makes our women folk just what they are,—the noblest, purest and sweetest creatures that God ever created for the delight, solace and comfort of honest, decent men. Truly, a man who has a mother or a wife who, instead of yearning for the public arena, or the maelstrom of politics or public life, prefers the refinement of true femininity and its attributes, can appreciate the beauty of American Womanhood. And so we say that the efforts of the American Woman to be beautiful, to be well dressed, and above all to be womanly, have developed her and made her what she is,—earth's dearest treasure.

But the young man of wealth. Alas! the tune must change. Their lives are so free from ambition or the need of action, that the natural result is physical and mental degeneracy. Kites rise AGAINST and not with the wind. Therefore, any life that speeds its flight and never meets the element of resistance to be faced or

overcome, *never gets far from the ground.* The gilded youth of to-day never knows what resistance means. He has no struggle to accomplish his physical desires, for the wealth of his progenitors has placed all things of a physical character within his reach. To satisfy his senses, that is all. And no wonder he is a weakling.

History shows that the giants of intellect and strength, with few exceptions, have been men who have known what it was to struggle in early life for physical needs. And in proportion to the energy expended from necessity, just in that proportion have strong men developed and gained the power or thing they sought. The sons of American millionaires never have to expend energy or force to satisfy their physical needs, and as a consequence the line of least resistance makes them just what undeveloped men always are,—much animal and very little man.

The mission of men on earth is to think a little, learn a little, do a little, every day; to move on to broader views, nobler desires and more able endeavors; to commend good, condemn wrong and let the world know where we stand; above all to accomplish something for the betterment of mankind, the increase of brotherly love, and the triumph of mentality over brutishness and appetite.

The American Woman fulfils her mission. Her beauty and character show how well. But does the American Youth measure up to the standard as we know it above? Read the answer in the faces and lives of the sons of American millionaires.

EDITORIAL NOTES AND CLIPPINGS.

Nervous Tension.—Many people wear themselves out needlessly. Of this there is no possible doubt, and their conscience is a species of tyrant to them. An exaggerated sense of duty leads many a person to anxious, ceaseless activity, to be constantly doing something, never to be idle a second of time, to scorn to rest. Such people are in unconscious nerve tension. They say they have no time to rest, they have so much to do, not thinking that they are rapidly unfitting themselves for probably what would have been their best and greatest work in after years. As there are conscious and unconscious thoughts, so there are conscious and unconscious nerve tensions. Self-control of nerve-force is the great lesson of health, and therefore of life itself. To understand how to relax is to understand how to strengthen nerves. Hearty laughter is a source of relaxation, and relaxation is also found in diversion and amusements. Change of air and scene is occasionally necessary. It is sufficient rest of body and mind which enables a man to accomplish his best work by relieving his nerve tension.—*From the Doctor's Magazine.*

Dogmatism and the Medical Profession.—"A certain profession of dogmatism," says a great surgeon in an address to medical students, "is essential in the treatment of the sick. The sick man will allow of no hesitancy in the recognition of disease. He blindly demands that the appearance of knowledge shall be absolute, however shadowy and unsubstantial may be the basis of it." But is this good advice? It is, so far as the patient is concerned, usually true at the time of illness, but there are several other considerations which we believe make the advice to the physician the reverse of wise. In the first place there are the patient's relatives and friends. Even in hospital practice and in private practice among the poor it is not true that the physician succeeds in humbugging the friends by an assumed dogmatism without the reality of knowledge and conviction. Among intelligent laymen, far more frequently than is supposed, one will find that any such sham certainty is at once detected. Doctors make a great mistake when they think their deceits really deceive. Then there is the patient who recovers. When he is well the false diagnosis, the changes of dogmatic opinion and medicines, the blind alley of proved er-

rors—these are thought over, and the doctor is scorned, not loved. This is, in fact, the origin of the famous saw concerning the wish of the devil to become a monk when he was sick, etc. Thirdly, comes the reaction on the dogmatist's character. One cannot dishonestly assume knowledge, and skill, and prophecy without at last fooling himself, and he then enters upon a life of continually descending tactlessness in which the fraud becomes proportionately more evident to others as it becomes more unconscious to self. The profession suffers also, because to it is charged the sin of the tricky doctor. Slyness, assumed virtues and knowledge, cunning—these do, in fact, prevent true professional success. But the foolish sly ones will never find it out.—*American Medicine.*

Treatment of Gonorrhea in the Female.—Gonorrhea in the female was, a few years ago, looked upon merely as a local and comparatively trivial condition, involving only the vagina and external genitalia. But more recently those of the medical profession who have had obstinate and next to incurable cases, have come to recognize it as the most dangerous disease of frequent occurrence which can affect the female. (Cancer being excepted.)

Gonorrhea, more than any other disease, is responsible for many of the complications in women which prove so destructive to her reproductive organs, producing the majority of the inflammatory conditions and intra-pelvic suppurations of tubes, uterus, or cellular structures.

Urethritis is a strong diagnostic point, as is any of the inflammatory conditions of the fourchette, the vulvo-vaginal glands or those of the vestibule. A vaginitis not caused by old age degenerations, traumatism, vesico-vaginal fistula, or a malignant disease is pretty sure to be of gonorrheal origin.

The treatment of this serious condition first of all should be so conducted as to avoid any extension of the infection, i. e. directed toward the complete arrest of the already present infection, having in mind the various lesions that rarely occur except in gonorrhea, and also realizing that if left to themselves these selfsame lesions are capable, in at least fifty per cent of all cases, of indefinite perpetuation. The endometrium and fallopian tubes being very favorable sites for secondary infection of the gonococci.

The discharge is usually small in quantity and of a muco-purulent character, generally from the urethra.

In all cases local treatment should be institute early, consisting of some efficient anti-gonorrheal remedy, to thoroughly cleanse the entire cervical canal and urethra, and in most cases after having irrigated the urethra and vaginal tract with a ½ or 1% solution of protargol (the proteid compound of silver), or by the use of antiseptic douches of carbolic acid one to forty, or potassium permanganate 1-2000, there is an arrest of the acute manifestations, also rapid disappearance of the discharge, and a stop to the further extension of the infection.

Various antiseptic tampons may be used, either in the form of the regular stock tampon or sterilized gauze soaked in protargol, carbolic acid, lysol or icthyol solutions or other antiseptics which tend to exert a distinct germicidal influence through destruction of all micro-organisms.

When the urethritis persists and there is evidence of chronic condition any of the efficient astringent antiseptic applications are found to be of benefit. Alum and zinc being especially good, these used in conjunction with the more distinctly anti-gonorrheal remedies with which the vagina and uterus may be packed (not a dangerous procedure when done skilfully and with proper antiseptic precautions and observation of conditions existing).

It has been found that in acute cases, as well as in chronic, obstinate ones, the use of Micajah's

medicated uterine wafers inserted into the vagina once or twice a day, or oftener, as the case requires, have been of marked value, rapidly decreasing the discharge, and effectually stopping the pruritis, and other disagreeable inflammatory conditions so commonly met with in gonorrhea of the female.

Besides the use of the wafers the physician may use the vaginal douches and injections as previously given. With the local treatment the use of some capsule or tablet administered internally containing Methylene blue with balsam of copaiba, or oil of sandal wood, oil of cinnamon, pulverized cubeb, and enough of pepsin to equalize the effect some of the above may have on the stomach, have also been of great service.

To sum up, the treatment should be early instituted, carefully and thoroughly performed, aiming to arrest extension of infection, allay inflammation, and stop the discharge.

The treatment, of course differs as to the different structures involved, but as gonorrhea is by no means a light and trivial condition, it should be most carefully and scientifically treated until all signs of the disease are eradicated,—the patient cured.

No man is better than his thoughts, and a bad egg is as good as any other until it is broken; it is the inside of both that defines their worth.

A doctor who tells the truth may have less patients at first, but the measure of self respect he is able to retain, is a splendid asset for the future.

If the psalmist responsible for the statement, "I said in my haste, all men are liars," was alive to-day, he might appreciate the value of first impressions.

"All things come to him who waits," may be true, but it saves a lot of time to go after what you want.

MEDICAL ABSTRACTS.

Radiotherapy.—Allen has treated a number of cases of cancer and other cutaneous affections with the x-rays, and finds a decided value in the treatment. Out of 50 cases of cancer 26 were discharged as clinically cured, 4 as improved, 10 were still under treatment and improving, and only 3 cases were discharged as unimproved, 2 were referred for surgical operations and 5 ended fatally. Eleven cases were as hopeless at the beginning of treatment as all who have to do with breast and uterine cases and cancer of the rectum know. He thinks he has observed a tendency of the tubes to produce dermatitis irrespective of their vacuum, or of any idiosyncrasy on the part of the patient. He does not believe that a surgical operation should necessarily precede the x-ray treatment. He has also used it in a great variety of skin affections, including lupus, psoriasis, eczema, acne, lupus erythematosus, xeroderma pigmentosum, favus, ringworm, leprosy, lichen planus, etc., and has secured in many cases better and quicker results than by the older methods alone, though he does not rely on it solely. In Hodgkin's disease and internal sarcoma, though he has no cure to report, he has had some gratifying improvements.—*Jour. of the A. M. A.*

Treatment of Locomotor Ataxia.—The most important consideration is, as a rule, rest in bed, which, if prolonged, often hinders the progress of the disease. In any case, undue fatigue or over exertion should be avoided. The rest cure is eminently suited to this condition. The second great indication is good nursing and plenty of good rich food which contains very little fat. The third indication is frequent warm baths. The greatest benefit results from saline baths at a temperature of from 30 deg. to 32 deg. C. The bath should not, as a rule, last longer than fifteen minutes. Chills and sweating should be avoided and warm clothing should be worn. For individual symp-

toms, electricity, massage, narcotics, and analgesics are indicated.—*Indian Medical Record.*

THE SIGNS OF DEATH.—The signs on which a medical man should rely as furnishing the best evidence of the reality of death, prior to the commencement of putrefactive changes, are: 1. The absence of circulation and respiration. 2. The gradual cooling of the body, the extremities cooling first, and the trunk last. 3. Gradual supervention of rigor mortis. 4. The production of post-mortem stains or ecchymoses. The careful observation of these four signs by a medical man will enable him to distinguish a living from a dead body.—*British Medical Journal.*

OPHTHALMIA NEONATORUM.—In the *Philadelphia Medical Journal* of April 12, 1902, Reynolds Wilson says the demands in the matter of treatment of this state are met by the following method of procedure:

1. The antepartum care of the birth canal.
2. The scrupulous cleansing of the lids following expulsion of the head, and constantly thereafter, in suspicious cases.
3. The non-invasion of the palpebral sac by separation of the lids before the appearance of typical discharge.
4. Prompt and absolute isolation upon the appearance of conclusive signs of specific inflammation.
5. Thorough and systematic irrigation.
6. Astringent application of silver nitrate in cases of prolonged suppuration.

In conclusion, as an important adjunct to local treatment, attention should be given to the general condition of the child in cases of debility and malnutrition. The measures directed toward the care of the infant are comprised in cod-liver oil inunctions, small doses of whiskey internally, and breast feeding. At the same time the mother should receive some form of tonic treatment.—*Gazette.*

STRAY THOUGHTS.

SINCERITY.

How many words we say we do not mean,
That dim some eye and to it bring a tear,
And make us wish since hearts cannot be seen,
That we, alas, could learn to be sincere.

H. E. L.

"The man who seeks one thing in life, and but one,
May hope to achieve it before life be done.
But he who seeks all things wherever he goes,
Only reaps from the seeds which around him he sows,
A harvest of barren regrets."

—*From Lucile.*

"Nature helps every man to become what he wishes to become. If you put forth no efforts, Nature decides you with to become a nobody—and grants your wish."—*Elbert Hubbard.*

THE WASHERWOMAN'S SONG.—By Eugene F. Ware, Pension Commissioner.—President Roosevelt appointed Eugene F. Ware Pension Commissioner, it is believed, because he loved Mr. Ware's poetry. Several years ago President Roosevelt read and admired "The Washerwoman's Song," by Mr. Ware, and two years ago, when he went West to attend the reunion of the Rough Riders, he asked to meet the author. The two rode half way across Kansas together and became very good friends.

The poem reads:

I.

In a very humble cot,
In a rather quiet spot,
In the suds and in the soap,
Worked a woman full of hope;
Working, singing, all alone,
In a sort of undertone:
"With the Saviour for a friend,
He will keep me to the end."

II.

Not in sorrow nor in glee,
Working all day long was she,
As her children, three or four,
Played around her on the floor;
But in monotones the song
She was humming all day long:

"With the Saviour for a friend,
He will keep me to the end."

III

It's a song I do not sing,
For I scarce believe a thing
Of the stories that are told
Of the miracles of old;
But I know that her belief
Is the anodyne of grief
And will always be a friend
That will keep her to the end.

IV.

Just a trifle lonesome she,
Just as poor as poor could be;
But her spirits always rose,
Like the bubbles in the clothes,
And, though widowed and alone,
Cheered her with the monotone
Of a Saviour for a friend
Who would keep her to the end.

V.

I have seen her rub and scrub
On the washboard in the tub,
While the baby, sopped in suds,
Rolled and tumbled in the duds;
Or was paddling in the pools,
With old scissors stuck in spools;
She still humming of her Friend
Who would keep her to the end.

VI.

Human hopes and human creeds,
Have their root in human needs,
And I should not wish to strip
From that washerwoman's lip
Any song that she can sing,
Any hope that song can bring;
For the woman has a Friend
Who will keep her to the end.—*N. Y. Journal.*

NEWER REMEDIES.

Rudolph Ludwic Virchow.—His generic theory regarding cell life.—Applicable to Clinical Medicine of to-day.—By the death of Rudolph Ludwig Virchow the world lost one whose career is a mile-stone in the path of scientific medicine. His early life and work was that of a scientific revolutionist. The impregnable fallacies of tissue construction were swept away by the formidable argument which is now to become his greatest monument:—Omnis cellula e cellula. To this noted observer are accredited those theories and facts which formed the basis for cellular pathology. Virchow personally claimed no recognition for his research work in cytology. He disclaimed all title to originality in this new field, holding that only as an observer was he first to comprehend the pathologic importance of the individual cell.

In 1842 he advanced the view that the characteristic leucocytes of acute inflammation were the direct results of multiplication of connective-tissue corpuscles. This theory incited dispute and stimulated investigation. Addison and Waller contended that white corpuscles passed directly through the wall of a blood vessel. Discussion and research went hand in hand, swinging on the pivot point of the cell, per se. Cohnheim definitely proved the identity of the white corpuscles and, while overthrowing the theory advanced by Virchow, acknowledged that the fallacy of the great observer's original contention was the basis of all future work.

Conclusions deemed adequate to explain the various stages of inflammation were condemned. The cell became the object of critical study. Its histologic relationship to the human economy incited physiologists to undertake experimental work. Pathologists pursued to completeness the study of that intimate association between cell production and morbid growths. From these several lines of thought evolved the conception that the health of the human organism, as a unit, depended on the stability of cell life.

The chemico-biologic activity of the cell is explanatory of the value certain medicinal substances possess in the adjustment of disturbance due to inflammation. There exists an affinity in cellular tissue for hydroscopic fluids. Based on this known property of selectiveness the curative power of a drug must be estimated. Ehrlich's theory of "lateral chains" establishes the preference of the cell for toxines and the converse is equally true. That which is chemically compatible with the construction of the cell body ultimately forms a component part. The selective affinity for food, physical prop-

erty of locomotion and constant presence in inflammation determined the necessity of adapting the curative treatment to environment of the life of the cell.

To the general practitioner has been allotted the task of demonstrating the clinical value of all laboratory research. To him belongs the field of clinical medicine. Through his efforts in every-day practice the useful knowledge of the pathologist finds its way to the patient. Thus the patient unwittingly becomes the exponent of convincing truth.

Virchow gave birth to a theory which determined itself into indisputable fact. In direct scientific application to principle Antiphlogistine was constructed. The immediate factor essential for success was the reduction of inflammation. This Antiphlogistine does through the physical process of osmosis. Relief from pain occurs on diminished pressure of the congested tissue. Through the admixture of bland antiseptics the chemical irritation of the nerve ends is neutralized. In every way, chemical, physical and medicinal, Antiphlogistine re-establishes the stability of cell life, by acting upon and dispersing the mass of extravasated fluid. Absorption rapidly takes place through the relieved lymphatics. Antiphlogistine is the only medium to impart recuperative energy to the inflamed tissues.

Excessive Proteid Diet.—It doesn't require much of an argument to show that good material must go into the twenty-story building if it is to be solid and secure.

Yet a great many people seem to think that it matters little what kind of material goes into the building of the human structure!

They offer the body thistles and ask it to give back figs.

They feed on thorns and expect to pick roses.

Later, they find they have sown indigestion and are reaping ptomaines.

It's a wonderful laboratory, this human body. But it can't prevent the formation of deadly poisons within its very being.

Indeed, the alimentary tract may be regarded as one great laboratory for the manufacture of dangerous substances. "Biliousness" is a forcible illustration of the formation and the absorption of poisons, due largely to an excessive proteid diet. The nervous symptoms of the dyspeptic are often but the physiological demonstrations of putrefactive alkaloids.

Appreciating the importance of the command, "Keep the Bowels Open," The Antikamnia Chemical Company offers Laxative Antikamnia & Quinine Tablets, the laxative dose of which is one or two tablets, every two or three hours, as indicated. When a cathartic is desired, administer the Laxative Antikamnia & Quinine Tablets as directed and follow with a saline draught the next morning, before breakfast. This will hasten peristaltic action and assist in removing, at once, the accumulated fecal matter.

Simplicity in Treatment.—Simplicity in treatment especially in diseases of women is an item of no small importance. Micajah's Medicated Uterine Wafers are particularly efficacious in Leucorrhea, Endometritis, Gonorrhea, etc., and as there is no powder to spill nor water to soil the clothing they offer an ideal treatment in the above conditions. Insert wafer in vaginal canal up to the uterus every third night preceeded by copious injections of hot water.

In the supplement to the *Journal of Tuberculosis* the whole subject of Tuberculosis is covered by a series of articles written by Dr. Carl Von Ruck. For controlling the cough of Pleurisy, one of the complications of Phthisis, the doctor says (Jan., 1902, p. 101): "Cough must be allayed by heroin, codeine or even morphine, the choice being in the order named, but only when required on account of severe pain. I have also employed papine, which has

given me very satisfactory results and which possesses the very desirable advantage of not causing constipation."

TREATMENT OF PRE-SENILITY.—Ferguson details a case of impotence following a prolonged attack of gonorrhea. It was his third attack, and his virile power was almost lost and he suffered from frequent micturition. He had in addition orchitis on both sides. The case was peculiarly obstinate and many remedies had been used to no purpose. He had already exhausted the resources of several quacks. Sanmetto was prescribed in teaspoonful doses three times a day and improvement and recovery followed. *Med. News.*

An old deacon was told he would have to take brandy or he would go into fits. He replied he would try a few fits.

I feel a good deal that way in regard to Epsom Salts, whose taste to me is the most vile of any medication that ever passed my lips, although I am aware that many people do not find it so, but those who do, will find that in Abbott's Saline Laxative the unpleasant taste is almost entirely taken away, without impairing in the least the efficacy of this matchless Saline. Taken in a full glass of cold water before breakfast, it acts once, within two hours, and no more—just enough and no more, while other salines keep you worrying all day long. But any one who is indisposed to pay the fraction of a cent for these advantages, had better stick to the crude salts.

BOOK NOTICES.

A COMPEND OF OBSTETRICS — Especially adapted to the use of medical students and physicians. By Henry G. Landis, A. M., M. D., late Professor of Obstetrics and Diseases of Women in Starling Medical College. Revised and edited by William H. Wells, M. D., Adjunct Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic; Instructor of Obstetrics in the Jefferson Medical College, Philadelphia, etc. Seventh edition. Illustrated. Published by P. Blakiston's Son & Co., 1012 Walnut St., Philadelphia, 1901. Price, cloth binding, 80 cents; Interleaved for the addition of notes, $1.00 net.

This little book is a remarkable exposition of the whole subject of obstetrics. It is marvelous that a book of its size can cover so much and speaks highly for the erudition of the author and editor. Practitioners as well as students will find it a very valuable manual for easy reference, or study.

PHYSICIAN'S POCKET ACCOUNT BOOK—By J. J. Taylor, M. D., Editor of the Medical Council. Price, complete, book and leather case, including transportation, only One Dollar ($1.00). Each book will last from six months to a year. Subsequent books to fit in the case, only 50 cents each.

This is a complete account book, being the legal book of original entry, and requiring no further posting or transcribing into a ledger or any other book. The arrangement is such that each entry is made legally in full, in plain language, no signs, hieroglyphics, or abbreviations being necessary. The name and address of the debtor, date, person to whom the service is rendered, full description of service and amount, are all plainly set forth so that any judge or jury can read. Each debtor's account is on its own page, so that you can render an account at a minute's notice. Two-hundred and twenty-four accounts carried in one book. All complete in one full pocket-size book, with handsome leather case. Physicians wil find it very servicable and a great saver of unnecessary bookkeeping.

THE PHYSICIAN'S VISITING LIST FOR 1903 (Lindsay and Blakiston). Fifty-second year of its publication. Price $1.00. P. Blakiston's Son & Co., Philadelphia.

This list continues to maintain its excellence. It comprehends memoranda of nearly everything the busy physician needs in his daily round—e. g., Incompatibles, Dose Tables, Metric System and Record. Thousands of physicians throughout the country have already learned that it serves its purpose admirably, as all others, to whom we commend it, will learn on acquaintance with it.

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ORIGINAL ARTICLES

STATE PREVENTION OF TUBERCULOSIS.*

By J. Edward Stubbert, M. D., New York. Professor of Pulmonary Diseases, N. Y., Post-Graduate Medical School and Hospital; Member of the American Clinical Association; Fellow N. Y. Academy of Medicine, Etc., Etc.

Mr. President, Ladies and Gentlemen:

When I received an invitation to address you to-night, I not only appreciated the honor of appearing before so distinguished an audience but felt that no effort of any individual could be too great in view of the object of your meeting,—a discussion regarding the necessity of ways and means by which the Great White Plague in the State of Vermont should be stamped out; a State which, by reason of its local conditions and climate, should be particularly free from such dread ravages. We are not surprised, as medical men, to learn that one-seventh of the deaths in our cities to the south of your State are due to pulmonary tuberculosis, but it is amazing that consumption should be such a curse here in your beautiful State with its mountain altitudes and its bracing winter climate. It is startling, and may well cause us to fear the further development of a disease so infectious and far-reaching that even those living in ideal climates are not secure from its terrors. In your own State 121 out of each 1,000 deaths are due to phthisis. Only thirteen States in the Union have more deathes from this dread disease than Vermont!

But we should not consider phthisis from the standpoint of mortality alone. We must also remember that a large number of people recover spontaneously from tuberculosis or pass on into a condition of chronic invalidism, linger on partially helpless, largely useless to the commonwealth, a burden to their families, a source of danger to their community, and finally die of some other disease.

Among the laity and also, I regret to state, among the medical profession, there exist some who are honestly skeptical regarding the possibility of curing a patient once infected with tuberculosis. An old and honored friend of mine, one of the ablest physicians of the South, wrote me: "My friend, a man once infected with tuberculosis is henceforth a dying man, whether he lives one or many years." Frequently throughout each month the question is asked me in my consulting room, whether I really believe consumption is ever cured. More than twenty years ago, as a medical student, I was taught that occasionally, though rarely, a consumptive recovered. Evidence of this fact occasionally forced itself on the minds of able and thoughtful physicians. Not only did they see clinical evidence enacted before their very eyes, but the autopsy tables of the great hospitals frequently showed cured tuberculous foci in the lungs of persons dead from other diseases. It was shown even among those who, previously healthy, had died either from accident or from some acute malady of short duration. As far back as 1838 Carswell stated that pathological anatomy had given more decisive proof of the curability of pulmonary tuberculosis than any other chronic disease. Laennec, in 1879, declared his belief in an ab-

* Address delivered before the Vermont Society for the Study and Prevention of Tuberculosis, November 5th, 1902.

solute recovery from phthisis pulmonalis. Charcot goes farther than some others, stating that phthisis is completely curable even after cavities have formed.

Clinicians of to-day are united in the opinion (1) that pulmonary tuberculosis is a curable disease; (2) that in its very early stages a large majority of cases will recover if given an opportunity so to do; and (3) that the percentage of cures decreases in exact proportion to the advanced stage of the disease. For instance, records of my own, covering more than two thousand cases, show that 72% of incipient cases recover against 31 or 32% of all stages classed together, while over 90% of patients whose disease is in the indefinite or prebacillary stage are restored to health.

Having thus referred to the prevalence of pulmonary tuberculosis, its insidious methods of spreading among the population as well as its curability, and having shown that Vermont is one of the States in the Union most beset by its dangers, we must consider the most efficient and economical methods for, if not wholly stamping out the disease among you, at least curtailing its infection and decreasing the mortality.

First, we have to recognize the fact that tuberculosis is a dangerously infectious disease. Here let me emphasize the fact that it is not contagious nor violently infectious, but *dangerously* infectious. It is more or less a slow form of infection but is not violently infectious, for it must find a proper soil for its propagation before it becomes dangerous. Its spread is very easily controlled by hygienic and sanitary methods so simple that they may be practised efficiently by those of even moderate intelligence. Twenty years ago Koch brought to light, as the infecting germ of this disease, the tubercle bacillus. While it may be introduced into the human body by tuberculous food, that fact is a disputed one. On the other hand, we all agree that dried sputum is a direct source of infection. Hence, the first and most important of all steps in preventing the spread of this disease is to enact laws looking toward the proper disposal of such infectious sputa; prohibit any sick person from expectorating anywhere outside of combustible receptacles; provide that physicians shall instruct their patients in this matter, and, when they are among a class of people who will not or can not intelligently carry out their instructions, require them to report such to the local Health Board. Provide your Health Boards with the necessary means of visiting tenements and homes for the poor, for the purpose of instructing them in the ordinary laws of cleanliness and hygiene, and especially of impressing upon them the danger of infection from tuberculous sputa. And, gentlemen, having enacted these laws, see to it that they are *enforced*. Dr. Biggs, in New York City, reported that in tenement districts, owing to just such propaganda as outlined, recurrence of pulmonary tuberculosis among homes containing tuberculous patients decreased about twenty-five per cent.

I have said that the tubercle bacillus must find a good soil to grow upon. Each one of us, in larger towns and cities, inhales many infectious germs daily, but if our general health be up to the normal standard, these germs are for us innocuous or harmless. A large percentage of our town and city populations are not, as a rule, up to the normal physical standard, owing to poor hygienic surroundings, living in vitiated atmospheres, supplied with poor and insufficient food, and understanding neither their bad environment nor their unhealthy way of living. One of the most potent factors in "catching cold" is living in rooms kept at a temperature of 75° and 80° F. Patients should be instructed to keep their rooms at a temperature between 60° and 65° F. during the day, and at night to sleep with the windows open and artificial heat excluded.

Let your Society for the Prevention of Tuberculosis spread among these people litera-

ture teaching how to live, how to conserve their strength, and how to avoid infection by the careful disposal of the sputa; and let these pamphlets be so plain and practical as to be understood by the most humble reader.

State Aid and Institutions.—There should be compulsory registration by physicians of tuberculous patients. Insurance examiners should be required to send all tuberculars to the family physician or to a sanatorium. This is successfully carried out in Germany. There exists in that country, under governmental control and authority, a society known as the "State Invalidity Insurance Company" by which it is made obligatory that people known as the working class be insured against old age and ill health, as well as against accident. When a person develops tuberculosis he is at once sent to a sanatorium. If each state could formulate some such plan as this, many people could be cured or have life prolonged, and those poor, whose pride would be hurt by accepting charity, would feel comfortable in the thought that their own former payments to the insurance company were partially, if not wholly, supporting them while at the sanatorium.

When first the profession began to hope and believe that pulmonary tuberculosis was curable, a patient, as soon as infected, was without rhyme or reason ordered away from home. Large health resorts were established in various mountain regions here and abroad. Climatic change was, and is to-day, the means of placing many of these sufferers on the high road to health, and while some sought and found it, many failed in their efforts to recover their lost strength. Then the profession recognized that unadvised living and search for health even in the best of climates brought inadequate results. Constant supervision by the physician was impossible, and in this very supervision lay the means of salvation. Thus, the necessity for sanatoria was brought home to the profession and to the laity. The Saranac Sanatorium, which has been the means of saving hundreds of lives during the past fifteen years, will forever stand a monument to the genius and large-heartedness of Trudeau, the Father of American Sanatoria. The sanatorium at Liberty, named in memory of the illustrious Alfred Loomis, has sent back to happy homes many who entered its doors with hope almost extinguished. In Germany the most noted sanatoria are those at Falkenstein and Goerbersdorf, but even the many smaller ones deserve mention for excellent results. From compiled statistics we find a very remarkable decrease in mortality in all those countries where the work in sanatoria is conducted on proper and truly scientific lines.

If only seven individuals out of every hundred afflicted with consumption are able to go away, what hope is there for the ninety-three persons unable to avail themselves of the various health resorts and sanatoria established at points remote from their homes? These are compelled to remain at home and take their chances. The majority of them still working, hoping, and struggling, pass on into the incurable stage and then to the grave. To meet this phase of the situation Dr. Vincent Y. Bowditch, of Boston, established in its suburbs at Sharon, a quiet, modest institution which astonished us all by showing as large a percentage of good results as those obtained at sanatoria in theoretically better climates. Quickly the State of Massachusetts followed with its sanatorium at Rutland; Pennsylvania was the next; New Jersey has fallen into line; and now other States are taking up the work of looking after their consumptive poor.

As demonstrated by Dr. Bowditch, a specific class of climate is not required. Expensively equipped sanatoria are not essential. All that is needed is a well-built, wisely planned and intelligently conducted institution. It should be located in a healthy region near your largest centre of population. As for the construction of buildings for an inexpensive State Sanato-

rium, we must consider a plan which countenances neither the expensive American with its small separate cottages, necessitating individual heating and other costly administration consequent upon it, nor yet the European institution which houses a hundred or more patients under the same roof, for here the question of improper hygiene may be raised.

Economy of administration, close discipline, comfort of patients and perfect hygienic arrangements could all be comprised in a pavilion system on the following lines: There should be a large central building facing south. In this building should be located all necessary treatment rooms, a large assembly room, several reception rooms, dining room and offices; in the upper stories, the single sleeping rooms. Radiating diagonally from this building should be wings as long as might be necessary, in each of which could be located on the first floor a reception room and individual bed rooms; on the second floor, larger double rooms and (if economy must be strictly studied) even wards—one wing for male and one for female patients. On the top story of each wing should be located a large hospital ward. The upper story of the main building to have a glass roof and be divided into three spaces, the middle and larger one to be used as a sun parlor and reading room for walking patients, utilized too as a library in the interests of economy. The two ends of this room should connect with the male and female wards for convalescents desirous of the sun, who can leave their beds and yet are not able to go out of doors. To the rear of the main building should be established a central power house for lighting, heating, water supply, and culinary purposes. Some such plan thus outlined would give as cheap administration as could be expected, and, if each building were about three stories high, would accommodate as many patients as would be wise from a medical, hygienic, and moral standpoint. It is not wise to locate a sanatorium within woods and yet it should be near enough to them to provide a pleasure ground for recreation.

In making an appropriation for tuberculous patients, it must be remembered that it is more expensive to maintain one consumptive than a patient of the ordinary class met with in hospital service. The latter, generally speaking, is ill only temporarily of some acute malady which, during a large part of his stay in a hospital, prohibits him from eating much food. A consumptive, however, is wisely taught that the keynote of his treatment is his ability to eat and digest daily enormous quantities of food, and this of the best quality. If it is not provided for him, the struggle for life and health becomes a useless one. In a sanatorium about the size I have indicated, the daily per capita expense would probably be about $1.20.

A state sanatorium will serve the purpose not only of actually restoring to health a large percentage of individual patients admitted, but it will become, as a valuable educator, a powerful preventive of the disease in just as many centers of population as there are patients admitted within its walls. The majority of patients admitted have no idea of hygienic living. Take alone the question of ventilation and fresh air, and you will discover that by far the larger proportion of inhabitants in every city and among all social classes live in super-heated rooms and are afraid of the outside air. In a properly conducted sanatorium patients are taught the value of fresh air and the tonic effect of cold air. They learn how to live hygienically in every way, and also to avoid auto-infection or the communication of the disease to others. The result is, that when they return home, they necessarily become veritable missionaries in hygiene and prophylaxis of disease. As an illustration of this statement Knopf has said: "In the villages where the two largest German sanatoria are situated, Goerbersdorf and Falkenstein, the mortality from tuberculosis has actually decreased among the village people, being now one-third less than before

the establishment of these institutions. This is no doubt due to the examples set by the inmates of the sanatoria, and it is also the best proof that well conducted sanatoria for consumptives are not centers of infection, but, on the contrary, places where one is safest from contagion."

In considering the economical and social question of tuberculosis, we must remember that the period of life in which consumption is most frequently contracted is between the ages of puberty and thirty. Thus, the majority of those afflicted are at an age in which they should be of the greatest use to society. In caring for the insane each state spends a large sum of money each year, simply as a philanthropic duty from which the commonwealth receives no return. The incipient consumptive, however, is a man (or woman) who, if given an opportunity to eradicate the disease, becomes a useful member of the community.

By erecting a sanatorium for the consumptive poor, the state of Vermont will not only help these unfortunate sufferers by restoring them to health, but render to the community at large an incalculable service by preventing the spread of a disease which claims thousands of victims every year.

Tuberculosis, as will be seen from the foregoing, is one of the most fatal and prevalent diseases of the day. Its fatality, however, is due to neglect. This neglect is not voluntary on the part of the sufferers, but enforced by circumstances. Only about seven per cent of those affected are able to leave their homes or avail themselves of adequate treatment. The majority of patients who come under my notice are young married people beginning to assume theh responsibilities of life, unmarried people without any resources and no particular responsibility, or fathers and mothers of young families who are just beginning to rise financially, in many instances depending upon salaries which would cease with discontinuance of work. Time and time again when I tell such people to give up work temporarily and seek rest and treatment the reply is: "I cannot do it. I must take my chances and remain at work." The result is that in the majority of these cases, the disease advances more or less rapidly to the hopeless stage. In many instances if the state would furnish the invalid with necessary aid, he would be able to turn over his own savings to his family during his enforced banishment from home and work, but very, very seldom can a patient meet both of these necessary expenses.

These people represent the majority of the population; if successful in their various callings in life, they become the backbone of the country, and from their ranks are drawn the statesmen, the professional and business men of the future. The majority of these people have depending upon them families numbering from two to five on an average; hence, any disaster that overtakes the man is multiplied as many times as there are members of his family dependent upon him. Add to this the likelihood of having thrown upon the municipality these same families to be cared for, and it behooves the state from a selfish standpoint, on financial and political grounds alone, to give them the necessary aid in recovering health. This disease being curable—ninety-three per cent of those attacked being unable to care for themselves—justice, humanity, generosity and pity all demand that the state support them in their search for health.

Every physician who has much experience with this disease knows that a very large number of patients, who have been able to check the disease in the early stages and effect a cure, have been enabled to return to their homes, live in their former environments, and take up again the duties and burdens of life successfully. To me there is no more gratifying experience than to meet such former patients from day to day, in the ordinary walks of life, and to know that they are able to carry on their daily work without any fear of recurrence of

their trouble. These persons met casually by the uninformed would never be suspected of having passed through the ordeal of tuberculosis. They well represent our average successful citizens, and every one of them saved by the state to itself is a good investment.

Then, again, it is *obligatory* upon the state to protect the healthy portion of the population from the ravages of this disease.

In making appropriations for this work, again let me ask you to remember that if done partially, it had better not be attempted at all; that it costs more per capita to care for consumptives in a sanatorium than sufferers from acute diseases in hospitals. Therefore, the appropriation must be a generous one. No matter how much it costs in the first few years, the future results and immunity from this disease will largely reduce the average cost for this crusade.

25 East Forty-fifth Street.

SOME THERAPEUTIC CONSIDERATIONS.

By Edward R. Clark, M. D., Castleton.

The matter of therapeutics is a subject or question which meets us at every turn, a question ever old but always new, and like the poor always with us.

Medicine in all its branches has made wonderful advances since I began its study twenty years ago. Antiseptic surgery was just beginning to be talked about. The anesthetic properties of cocaine had not then been given to the world and were not until two years later, or in October or November, 1884.

Pathology in nearly all its branches has been revolutionized, particularly surgical pathology. It is only within about four years that what we now regard as the true pathology of fever and ague and yellow fever were discovered. In fact, I well remember that the article on fever and ague in the twentieth century practice of medicine having been already prepared and ready for the press, had to be entirely re-written and its publication was thus delayed nearly or quite a year.

I do not claim to be up-to-date in all respects; but I endeavor to use my eyes and ears to the best of my ability to keep abreast of the best thought in our line of work. In this generation if a man is entirely up-to-date in everything pertaining to the medical profession, he will have but little time to ride over our green hills or through our fertile valleys attending to the wants of patients impecunious or otherwise.

A couple of months ago there fell into my hands the note books on therapeutics of the late Dr. I. N. W., dated Castleton, Vt., April and May, 1840, together with some papers, prepared at a later date, for presentation to some scientific body. I have not had time to go over them all, but in no instance could it be determined when or where they were presented.

In looking over one of these papers, entitled "The pathology of malarial and intermittent fevers," the contrast is indeed startling between the knowledge of pathology of that day and our more recent development. In looking over the book of notes and comparing them with more recent works on therapeutics, the similarity is, to me, quite surprising, and I have wondered if our grandfathers had learned all there was to know of opium, of hyosciamus, of conium, of aconite, of digitalis, or of many others whose efficiency depends on some alkaloid hidden by nature in the depths of its cellular entities. In these notes I find scarcely any reference to morphine and only the slightest reference to any of the other alkaloids and then only under antidotes to vegetable poisons.

In one of the most recent works on therapeutics in an article devoted to prescription writing, the prescriptions there given show a striking resemblance to those in the note book of 62 years ago. The difference is almost entirely in the phrasing, with almost exactly the same range of dosage. In both the older and newer

* Read at the 89th Annual Meeting of the Vermont State Medical Society.

work the injunction is often given "to be sure and get a good article;" "to be sure that the medicament is prepared from an herb of undoubted purity and gathered in the proper season of the year," without saying when or what is the proper season.

Now it is well known to analytical chemists that light and shade, moisture and dryness, have a large bearing on the amount of active principle which many of our medicinal plants contain; and it has happened more than once, perhaps more particularly in the past when the individual pharmacist made his own tinctures and extracts, made them with all the care at his command, that irreparable injury has been done even when the medicine was prescribed in moderate dose, because on the *one hand* it contained too large an amount of the active principle and on the other hand it contained so little as to be practically inert. And it is for this reason that we, every now and then, hear discussions pro and con for drug analysis and a better drug standardization. It is for this reason that the attempts of Parke, Davis & Co., with their normal liquid preparations, have been a step in the right direction.

But the situation would not be so bad were it not a fact that many or all of our active medicinal plants contain more than one active principle, often of conflicting and antagonistic properties, usually the principles of the lesser amount are the least desirable and do not apparently affect the action of the remedy; but under various and varying conditions of light and shade the ratio is reversed and consequently the action of the remedy; and this, gentlemen, is, I believe, one of the reasons why we have had in the past so many contradicting reports concerning the action of remedies.

I am well aware that at the present time, when most of our tinctures and extracts are prepared in large quantities, as they now are by our large concerns, that the average of therapeutic activity is much better than it was some years ago; but for all that I contend that there is a better, a safer, a more rational procedure and that is in the use of the alkaloids, resins, sesamoids, glucosides and concentrations now on the market and easily obtainable by almost everyone.

To be sure there is no doubt but what we must to some extent re-read, re-study and investigate anew some of our old standbys, as they are called. With these preparations during the last three and one-half years, I have been able to accomplish things, particularly in the treatment of nasal, throat and pulmonary troubles, which, to me, had, up to this time seemed to be impossible. For a number of years I had almost discarded the use of many of our tinctures on account of the uncertainty of their action. A couple of years ago, in conversation with a distinguished member of this body, I found the same difficulties encountered and the problem solved much as I have been solving it.

It is not possible for a man to become proficient in the use of all these things at once, but if he will take a few of the most common, which are also the most important, at a time, he will soon be master of the whole situation. Judging the future by my past experience, I believe it will be only a question of time when tinctures and fluid extracts will be things of the past and when the alkoloids and their congeners, the resins, glucosides, etc., will be the preparations on which we will depend.

Concerning the antitoxins I have nothing to say for the reason that since their introduction into medical practice I have not seen a case requiring their use, nor have I known of but one case within the range of my practice during the last nine years. There are, however, some of the newer preparations which are deserving of mention, but the vast majority of "ones" and "odes" and "tones" the literature of which comes to our tables by the bushel, are not worthy of a moment's consideration, except as they choke up the drafts to our stoves and furnish an opportunity for the use of a few elegant

"cuss words." There are two of the newer products which I would mention, and they are adrenaline chloride and chloretone. I have not had an opportunity to test chloretone in all the relations in which it is recommended, but certainly as an hypnotic it deserves high rank I have tested it with all kinds of people and under many circumstances and have always found it reliable and so far as I can yet see it produces no ill effect.

Of all the remedies for hay fever and nasal catarrh, so far as I have been able to test them, adrenaline chloride takes the first rank. So far as I have been able to test any remedies for this, one of the most distressing complaints to which the human family is heir, I find no remedy nor combination of remedies which are worth mentioning in comparison with it.

TUBERCULOSIS IN VERMONT.*

By H. Edwin Lewis, M. D., Burlington, Vt.

The opportunity of adding ever so little to a discussion of tuberculosis should never be neglected. There is always danger of over doing most subjects, and many in an extremely short time can be worn threadbare by over discussion; but this danger can never threaten tuberculosis as long as one-tenth of all the deaths in Vermont can be laid to its door, and there remains a single prospect of decreasing its ravages.

Therefore, while I can expect to contribute very little to the earnest remarks we have heard this evening, I would like to add a few words in regard to the local situation in our state. To begin with, the statement is often heard that Vermont has less tuberculosis than her sister states—in fact that our state is so healthy that the disease is comparatively uncommon. Let me correct this error by saying that the census for 1900 shows, in spite of our bracing mountain air, and the fact that our people are subjected to less over crowding than any other New England state, that the death rate from tuberculosis is very little less in Vermont than elsewhere. The death rate per ten thousand of population in the different New England states is as follows: Rhode Island 20.6, Maine 17, Connecticut 16.9, Massachusetts 15.6, Vermont 15.5, New Hampshire 15.4. Thus it can be seen that Vermont is no freer from tuberculosis than her neighboring states. Again, out of fifty states and territories, Vermont stands number seventeen in proportion to the death rate from consumption, and there are thirty-three other states and territories with a smaller proportion of deaths each year from this dread disease than our own. Still another sad fact for Vermont pride to digest is that Pennsylvania with her six million people, Illinois with nearly five million, Ohio with four million, and Missouri and Texas with three million each, all have a lower death rate from consumption than Vermont with only three hundred and forty-three thousand, and no crowded cities! Can any one, in the face of these facts, question the prevalence of tuberculosis in our state? If so, let me call attention to a few local data.

In 1901 there were seven hundred and forty-eight deaths in Vermont from contagious diseases, of which typhoid fever was responsible for ninety-seven, scarlet fever forty-five, whooping cough thirty-five, diphtheria thirty-two, measles twenty-six, and tuberculosis, the arch destroyer, five hundred and thirteen! The significance of these figures is apparent when we consider that 68.5 per cent, or more than two-thirds of all deaths from communicable, and therefore preventable diseases, were due to tuberculosis. Still further, although we fear typhoid fever, and its presence in a community is always met by the most stringent measures to prevent its spread, *there are over five times as many deaths each year from consumption;* and although the fear of diphtheria will pale the parent's cheek, and stir a community to the

*Being the discussion in part of Dr. J. E. Stubbert's paper before the Vermont Society for the Study and Prevention of Tuberculosis, November 5, 1902.

utmost precaution, *every year tuberculosis robs us of more than sixteen times as many lives.*

The fact is, no matter how we look at the tuberculosis question, it becomes one of the greatest problems of modern society, and the need of meeting this great live question, face to face is doubly urgent when we look around and see what our neighbors are accomplishing in actually decreasing the number of tuberculosis victims.

In my mind, the key note of the whole situation is that consumption is a preventable and a curable disease. This statement would have been derided fifteen years ago, but to-day, thank God, it cannot be gainsaid. We know that the disease is the result of a specific germ which attacks individuals rendered susceptible to its deleterious influences, by habits, occupation and environment. This being so, we can go forth, every one of us, and preach the gospel of prevention; first, as it concerns the decrease of infective material, thus limiting the danger for susceptible individuals, and second, as it concerns the building up of all human resistance to the point where the germ can do no harm.

In this generation our efforts can never be more than relative, and ages must pass before an absolute conquest of tuberculosis can be achieved. But every measure that raises the index of human resistance, or decreases the amount of tuberculous infective material deserves the earnest support of every thinking person, since it limits the spread of the disease, decreases the amount of suffering as well as the number of deaths, and contributes to the ultimate triumph over a loathsome malady that ages hence will witness and our posterity enjoy.

But in the working out of this problem along preventive lines, there is another phase that should not escape our attention. We cannot at one fell stroke eliminate every susceptible individual nor much less stamp out every source of infective material. Time alone will accomplish this much desired result. Consequently, a certain number of consumptives will always be with us. In the interests of self protection as well as of humanity, we must care for these afflicted ones, and herein lies the opportunity of philanthropy and the state, for properly equipped sanitaria offer the greatest and surest hope to the consumptive. The steps being taken in many states of our country tending toward the establishment of state institutions for consumptives show the trend of progress in this direction.

Some one asks why the medical profession are so stanch in the support of the sanitarium movement. I will tell you. Because we know better than any one else what consumption means to the afflicted one, his family and his doctor if he stays in his home,—death to himself, danger to his family, failure for his physician. One of the most discouraging things in the practice of medicine is a struggle with a case of tuberculosis. It takes all of the enthusiasm out of a doctor to find himself so powerless, so unable to cope with the disease, and it is little wonder that we who have passed through many of these struggles, welcome any movement that offers the measure of success that we know is being obtained in properly arranged sanitaria.

Picture to yourself a man of thirty-five with a wife and four little children. He is only a day laborer and his small wages, under the best of circumstances, barely serve to keep the wolf from the door. One day he begins to cough, and though he feels weak and sick, he manages to keep along for the next two months. Then from sheer necessity he is obliged to stay at home, and give up. He has not consulted a doctor until now, for he feared the expense. The physician whom he calls in, looks him over, sees the fearful grip of tuberculosis, prescribes the usual remedies, and then noting the poor, meagre surroundings, passes out with a heavy heart. He knows that there is no hope for this poor sufferer. The pros-

pect of his getting a proper amount of good air, good food, good nursing, and all the things that would tend to build up his vitality and resistance is very small; these things can never be enlisted in his behalf. He is literally doomed by circumstances to a living death for the next year, possibly a longer or shorter period. Perhaps he has been living in two small rooms, for economy's sake; certainly now that his earning capacity is stopped, he cannot pick out happier, or larger surroundings. And so he is obliged to stay, day in and day out, in the confines of one small room, poorly ventilated, and whose atmosphere is further taxed by the other members of the family. His poor wife, in order to keep the family from starving to death, is obliged to go out and earn what she can; and thus he is denied her care and attention. And so he goes along week after week, month after month, coughing his life away, and discharging into the atmosphere of his room milllions of diseased germs. The harm to himself is apparent, but what a menace to the wife and little ones who have to also breathe the polluted air! He keeps going from bad to worse, suffering not only the curse of his disease, but the pangs and despair of hopelessness. He sees his little ones suffering for the necessities of life, and knows that he is powerless to give them to them. More than that, if he is a man of any intelligence, he realizes the danger they are in of contracting the same disease. The horror of his position can only be half appreciated. At last, after a variable period, when he has run the whole gamut of human suffering, of human anguish, without a single bright lining to the dark clouds of his life, he passes away, across the Great Divide; and the legacy he leaves is not only poverty but disease. The hopelessness of his case is its saddest feature.

Now let us consider the other side. Supposing the same man, when he first called in a physician, had been given an opportunity of getting away to a properly equipped sanitarium, under State control; he could go with assurances that his chances were considerably more than even; he could know that the money that otherwise would have been used for medicine and nourishment for himself can now be used for his little ones; he would know that he was not endangering their young lives; and the prospects of being given back to them again would fill him with hope and strength to regain his health. And if it was our privilege to watch this man through the weeks and months that he was at this sanitarium, and we could see him gaining in flesh, in strength, in vitality. and the color creeping into his face as the symptoms of his disease pass away, as happens in many cases in every sanitarium, we would indeed appreciate the boon and blessing to humanity of the sanitarium treatment. Certainly there are few who could see all this, and not sing the praises of the sanitarium movement. Just consider for a moment what happiness, what joy would fill the hearts of that wife and those little children, to say nothing of the father and husband himself, at that family reunion, when his disease would be sufficiently conquered for him to come back again, well and strong, ready to take up the battle of life again for the independence of his family.

These cases have been duplicated many times; the first innumerable times in our own State, and the second many times where sanitaria have been established. All of us are too familiar with the first picture, and—all of us hope to be familiar with the other. Is the statement wrong, knowing what the sanatarium can do, that a State or a community are false to their duty if they do not avail themselves of these means of saving life and suffering? I do not think so.

Many States in the Union are proving themselves alive to their duties by the appointment of Tuberculosis Commissions to arrange and consider State sanitaria. There is a bill to this effect before our present legislature, and we hope that they will see fit to make a start in this all important direction. Vermont has had

a glorious past, and we are enjoying a remarkable present. May the needs presented by the tuberculosis problem be squarely met, and whatever is right done in the interests of the five hundred men, women and children who go down to the grave each year in the clutches of this dread disease.

THE VERMONT SOCIETY FOR THE STUDY AND PREVENTION OF TUBERCULOSIS.

On invitation from the joint committee on public health of the legislature, the Vermont Society for the Study and Prevention of Tuberculosis held a meeting in Representatives hall, Montpelier, on the evening of November 5, 1902, which attracted a large audience. Senator Stiles of Caledonia county presided. The general theme for discussion, human tuberculosis, and the two Senate bills introduced by Senator Russell were incidentally discussed. After stating the object of the meeting Senator Stiles turned over the meeting to Dr. D. C. Hawley of Burlington, president of the Society named.

Dr. Hawley stated in opening that tuberculosis is curable, and we may expect to see a decrease of this disease in the future. He advocated the establishment of a State sanitarium for the treatment of tuberculosis.

Dr. J. Edward Stubbert, professor of pulmonary diseases in the New York Post-Graduate Medical School and Hospital in New York, by invitation, delivered an address on "State Prevention of Tuberculosis." (See page 309.) Dr. Stubbert urged the legislature to make an appropriation for establishing a State sanitarium where consumption can be properly and scientifically treated, and where the disease, if not too far advanced, can be cured.

This address was a very scholarly production and was listened to with careful attention by the many present, including the Governor and other State officials.

The general discussion in reference to the address and the two tuberculosis bills before the legislature, was opened by the Hon. Henry Ballard of Burlington.

He said that he was a lawyer who had had something to do with the drafting of the bills in question. He explained the bills in detail, and showed how they were adapted to the purpose for which they were intended; that one was the supplement to the other; that one stated the purpose to be accomplished, and the other provided as to the way and manner that it should be done.

He referred to the fact, that although he was not of the medical profession, yet he always had had a personal interest in such matters. That he had an inherited tendency to tuberculosis,and that once in the years 1882 and 1883, he was a strongly threatened victim of it; but that he had cured himself of it, not by the aid of drugs or medicine, but by an active outdoor life for several months during three years in the pure air of the Rocky Mountain country.

He said that when he was a member of the Vermont State Senate in 1878 and 1879, the first bill that he introduced into that body, was one to establish a State Board of Health. Dr. H. D. Holton of Brattleboro, a veteran in this kind of service, was the author of that bill, and has been a member of that Board ever since. That at that time he struggled with all his might against strenuous opposition to secure its passage; that it passed the Senate at that time, but was defeated in the House; that a State Board of Health was finally established in 1886; that at that time he was a member of the "Third House,"and did what he could from that standpoint to secure its passage; that since that time, the results of the work of the State Board have fully justified the claims of its strongest advocates; that it was and always has been from the first of great benefit to the people of our State; that it had become one of our permanent institutions that could not be dispensed with; that it was a fact, of which our

people might well be proud, that it had established and maintained the first School for Health Officers ever established in our country, an example that has been followed since by many other States; that our State Laboratory of Hygiene and Bacteriology was one of the best appointed and best conducted, and was doing some of the best work of any similar institution in any State in the Union.

He said that the purpose of these bills was a step forward in the same line of progress; "Vermonters ahead," was as good a motto in civil affairs as in war; that if it was true, as it undoubtedly was, that this fell destroyer of human life,—the great "White Plague,"—as it has been appropriately called—was the cause of more invalidism and death than any other disease that flesh was heir to, it was of the utmost and vital importance that our State should take the steps called for in these bills.

He said that Dr. Johnson had said that "a sick man was a scoundrel." That might not be literally true, but it was true that a sick man, an invalid, was a burden, not only to his friends and family, but also to the State; that he was not a producer, but only a consumer; not a self-supporting citizen, but one that must be supported by others, either by his relatives or friends, or quite often as an object of charity at the public expense in some charitable institution or in the public poor house.

Such being facts, which all well know, there can be but one course for this legislature to take, and that is to enact these bills; there ought not to be, I can see no reason why there should be, a single vote against this measure.

He said that no matter what other measures they may be called upon to enact during the present session of the legislature, whether measures relating to the liquor traffic, tax laws, caucus laws, corporations or moving the State House to Burlington, fish, frog or hedghog bills, no matter what, there would be none, there could be none more vitally important to our people than this.

It has been said that "all that a man has would he give for his life," and that is true, and no one knows, or can know, or appreciate, the value of health till he has lost it, and then he will give all that he has, if necessary, to regain it.

That in the matter of health, "prevention is better than cure," "forewarned is forearmed," and in the recovery from or the cure of disease, it is the earliest steps taken that are always the most effective. But as elsewhere, it is the "stitch in time that saves nine."

To the suggestion that has been made, that this matter could as well be attended to by the State Board of Health as by a special board, he said that already the State Board had all that it could properly attend to; that this special board that is asked for, could better attend to this special duty and at a less expense to the State than could the State Board were this added duty put upon it. He showed that in the interests of economy to the State it was better to have this special Board of Commissioners; that this special work called for would thus be more effectively and better done.

Dr. C. S. Caverly of Rutland, president of the State Board of Health, the next speaker, said the Board is in hearty sympathy with the Russell bills. He believed a sanitarium in Vermont would be a popular institution. It would appeal to and aid the masses. Dr. Caverly gave statistics showing the annual average decrease of consumption in Vermont, a total one-third in the last 20 years.

Dr. H. Edwin Lewis of Burlington, secretary of the Vermont Society for the Study and Prevention of Tuberculosis, gave statistics for Vermont and other States, showing that consumption is responsible for five times as many deaths every year as is typhoid fever and sixteen times as many as diphtheria. Dr. Lewis emphasized the fact that tuberculosis is preventable and curable. (See page 316.)

Dr. H. D. Holton of Brattleboro, secretary of the State Board of Health, emphasized

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Dr. DON D. GROUT, President, Waterbury, Vt.

Dr. H. EDWIN LEWIS, Secretary, Burlington, Vt.

Hon. HENRY BALLARD, Burlington, Vt.

Dr. JAMES CONLAND, Brattleboro, Vt.

Dr. L. W. HUBBARD, Lyndon, Vt.

VERMONT STATE TUBERCULOSIS COMMISSION.

what those who preceded him had said and dwelt upon the benefits of a State sanitarium. He made the somewhat startling statement that there are to-day in the State of Vermont more than 1,500 people ill with tuberculosis. To care for the families of those who die in poverty would cost the State more than it would to erect a State sanitarium.

Dr. F. E. Clark, health officer of Burlington, was the last speaker. He spoke of the great benefit to be derived from proper notification of the existence of tuberculosis thereby enabling physicians to properly control it.

On motion of the Hon. Henry Ballard a vote of thanks was extended to Dr. Stubbert for his very able and instructive address.

THE VERMONT STATE TUBERCULOSIS COMMISSION.

Pursuant with an act passed by the recent Vermont legislature, the Governor has appointed the following named gentlemen as a State Tuberculosis Commission: Dr. Don D. Grout of Waterbury, Hon. Henry Ballard of Burlington, Dr. H. Edwin Lewis of Burlington, Dr. Lorenzo W. Hubbard of Lyndon and Dr. James Conland of Brattleboro.

Dr. Don D. Grout of Waterbury, was graduated from the Medical Department of the University of Vermont in the class of 1872. He is a member of the American Medical Association, the Vermont State Medical Society and both the Burlington and Chittenden County and the Washington County Medical Societies. He is also First Vice-President of the Vermont Society for the Study and Prevention of Tuberculosis. Dr. Grout is well known throughout the State, especially for his fearless stand in regard to the communicability of bovine tuberculosis to the human family. He has made several interesting contributions to medical literature.

Hon. Henry Ballard of Burlington, is one of the best known lawyers in the State of Vermont. As a criminal lawyer he ranks first in the State, and has won considerable renown for his handling of cases involving a knowledge of medicine. He is an able speaker and has shown great interest in the tuberculosis question. Mr. Ballard has been the recipient of many honors, political and otherwise, and is a member of the Executive Council of the Vermont Society for the Study and Prevention of Tuberculosis.

Dr. H. Edwin Lewis of Burlington, is a graduate of the Medical Department of the University of Vermont, class of 1897. For several years he has been interested in the study of tuberculosis, and in July, 1901, attended the meeting of the British Congress of Tuberculosis at London, as chairman of the delegation from the American Congress of Tuberculosis. Dr. Lewis is Editor of the VERMONT MEDICAL MONTHLY, consulting surgeon and eye, ear, nose and throat specialist of the Fanny Allen Hospital, aurist and ophthalmologist at the Providence Orphan Asylum and Hospital and a member of American Medical Association, Medico-Legal Society of New York, American Medical Editors' Association, Vermont State Medical Society, Burlington and Chittenden County Clinical Society and other organizations medical and otherwise. Dr. Lewis is also the secretary of the Vermont Society for the Study and Prevention of Tuberculosis.

Dr. Lorenzo W. Hubbard of Lyndon, is a graduate of the Bellvue Hospital Medical College, class of 1867. He was a member of the State legislature in 1902, and has an excellent reputation in the State as a public spirited and capable medical man. He is a member of many medical organizations, including the State Medical Society, and is at present president of the Caledonia County Medical Society.

Dr. James Conland of Brattleboro, is a graduate of the University of Vermont Medical Department, class of 1878. He was a member of the legislature of 1902, and played a very

important part in shaping the high license local option bill. He is a member of the State Medical Society, the Windham County Medical Society and many other organizations.

The first meeting of the Commission will be held December 31, 1902, for organization and the mapping out of their work.

SPECIAL THERAPEUTIC ARTICLE.

THE VALUE OF GUDE'S PEPTO-MANGAN IN ANAEMIA.

By Dr. Enrique Diago, Havana, Superintendent of Hospital No. 1, Havana, Cuba, and Dr. Jose F. Benitez, Havana, Chief of the ent of Hospital No. 1, Havana, Cuba, and Translated from the "Progreso Medico," Havana, April, 1902.

Anæmia is a very common disease in this country (Cuba), and consequently one against which the physician is often obliged to contend in the practice of his art. While the use of the ordinary iron preparations often gives all the effects that could be desired, yet it usually produces a condition which may be regarded as a secondary disease—constipation. In looking about for a preparation which would not present this very serious disadvantage, which cannot always be counteracted by the coincident administration of laxatives, we came across Gude's Pepto-Mangan, which, according to the published statements of many clinicians, seemed to us a remedy worth trial in a large series of cases. Accordingly, we obtained a sufficient supply of this preparation for our hospital, and began to treat all our cases of anæmia, in which iron was indicated, with Gude's Pepto-Mangan.

In presenting now the results of our observations with this pharmaceutical compound, we may say at once that our expectations were more than realized, when we noted its efficiency in combating the disease, and its perfect palatability and freedom from constipating after effects.

One of us, Dr. Benitez, chief of the laboratory of the hospital, undertook the task of keeping minute records of all the cases observed including a record of the amount of hæmoglobin and of the number of the red blood cells, both before and after the treatment. For the purpose of illustration, we relate briefly six cases, which show conclusively the effects of Gude's Pepto-Mangan on persons with anæmia, and prove without doubt that the administration of this remedy is connected with none of the disadvantages and discomforts attending the use of the ordinary preparations of iron.

Case I.—N. G., aged twenty-six years, was admitted to the hospital, suffering from loss of nutrition, emaciation, pallor of the skin and mucous membranes, loss of memory, anorexia, mental depression,—in a word, from all the typical symptoms of anæmia. This condition was traced in his case to a chronic malaria, from which the patient has been suffering for a long time. The patient weighed only 102 pounds at the time of admission.

Pepto-Mangan (Gude) was given in doses of two tablespoonfuls twice daily, at breakfast and at dinner respectively, with some cinchona wine. The first blood examination showed 2,400,000 red blood corpuscles c. m., by the Thoma-Zeiss method. Ten days after the beginning of the treatment, this patient, who had been so extremely pale when he entered, began to improve as regards the color of his cheeks and general appearance. His general well-being was so marked that he spoke with pleasure of the marked improvement in his condition which had taken place since he had been taking the new remedy at our hospital. In these ten days he had gained five pounds in weight and was able to walk around the ward without the lassitude which he had felt when he was admitted. The blood was examined a second time, showing an increase of 300,000 red blood cells. The patient was discharged cured after fifty days' treatment, weighing 130 pounds and with a blood-count indicating 2,800,000 red blood cells c. m.

Case II.—Mrs. C. D., aged 34 years, who gave a history of miscarriage, was admitted with the symptoms of anæmia, secondary to the loss of blood occasioned by the accident mentioned. The chief symptoms were emaciation, loss of strength, and gastrointestinal dis-

turbances. She weighed only 90 pounds when she entered the hospital, and her blood showed a marked diminution in the amount of hæmoglobin, and only 2,300,000 red blood cells to the cubic millimetre.

Gude's Pepto-Mangan was prescribed in the same doses as in the preceding case, and all went well until the tenth day, when the patient of her own accord, in order to facilitate the cure, and to accelerate the recovery, took five tablespoonfuls of the preparation during the day, causing a slight disorder of the stomach. The administration of Pepto-Mangan was thereupon discontinued, and tablets of bismuth and salol, together with a purgative were given. Five days later, the Pepto-Mangan was resumed, at first in doses of two teaspoonfuls, and two days later in doses of two tablespoonfuls. The further course of the treatment went on without any mishap, and the patient recovered completely. On leaving the hospital the hæmoglobin was found normal, and the number of red blood cells was found to have increased to 3,500,000 c. m., while the patient's weight had increased twenty-one pounds within fifty days.

Case III.—Mr. M. D., aged 26 years, who had suffered during the preceding month from an attack of acute articular rheumatism involving a number of joints, entered the hospital complaining of the symptoms of anæmia. He had the appearance of a convalescent, with pale skin and mucous membranes, fatigue in walking, emaciation, etc. There was œdema about the ankles, but no valvular lesion in the heart, and there were in addition, absence of appetite, insomnia, functional depression of the genital apparatus, and dyspepsia. The patient weighed only 92 pounds, and his blood when examined showed a decrease in the amount of hæmoglobin and only 2,500,000 red blood cells c. m. At the end of fifteen days' treatment, which consisted of the administration of two tablespoonfuls of Pepto-Mangan (Gude) at breakfast, of the same amount at dinner and of an additional tablespoonful at noon, the patient had gained a great deal of strength, his pallor had almost disappeared, the hæmoglobin had increased and reached its normal quantity, and the red blood cells had increased to 3,200,000 c. m. The patient was therefore discharged completely cured at the end of forty days after admission.

Case IV.—Mr. R. G., aged 42 years, who did not show any signs of organic disease, and who presented no characteristics of a gouty or lithæmic diathesis, was admitted to the hospital in a greatly disturbed state of mind on account of attack of vertigo, palpitation of the heart, extreme weakness, and various erratic pains in the muscles. He gave a history of a recent attack of influenza, during which his nervous symptoms had become intensified. He had not had a very marked rise of temperature, and the respiratory passages were scarcely affected during this attack, but there were severe pains in the back and joints, and an intense headache. The examination of the blood showed the presence of 3,000,000 red blood cells c. m., and the patient was found to weigh only 110 pounds.

He was placed exclusively on Pepto-Mangan (Gude) treatment. Twenty days later, the pains had ceased; he ate well; his weight had increased to the extent of four pounds; and the red blood corpuscles had increased in number by 200,000. Thirty days after admission he was discharged cured.

Case V.—Miss C. P., aged 16 years, was admitted to the hospital with a very pale skin and a deficient muscular and adipose development. Her menstruation had become irregular, and she had suffered from various nervous disturbances. Her growth had not kept in harmony with her nutrition, and she presented the characteristics of chloroanæmia, as frequently seen in Cuban girls,—namely, accompanied by a series of neurasthenic symptoms. She weighed only 87 pounds, and the blood-count showed only 1,800,000 red blood corpuscles c. m. After ten days' treatment, the number of red blood corpuscles increased by 200,000, and the weight of the patient by three pounds. Twenty-six days after admission, she was removed from the hospital by her relatives, and on discharge her weight was 94 pounds.

Case VI.—Mr. G. F., aged 38, whose previous history was negative, and who had not suffered from any severe illness shortly before admission, entered complaining of loss of flesh and strength, decrease of normal weight and extraordinary fatigue after his usual work. He attributed these symptoms to transgressions of hygienic rules. The first blood examination showed 2,600,000 red blood cells c. m. The patient weighed 106 pounds on admission. Thirty-six days later, after having been under treatment with Pepto-Mangan (Gude) during the entire period, he was discharged at his own request. He had increased eleven pounds in weight and his red corpuscles numbered 2,850,000 c. m. (an increase of 250,000). He went back to his usual work without experiencing any unusual fatigue.

To sum up the results obtained with the employment of Pepto-Mangan (Gude) in the treatment of anæmias, we may say conscientiously, that it is the best remedy we know of for this purpose, and that we do not hesitate to commend it to the medical profession at large, and especially to our confreres in Cuba, as an iron preparation that possesses all the advantages that can be demanded of such a remedy and none of the disadvantages that are characteristic of other iron preparations. We would especially emphasize also that Pepto-Mangan (Gude) is very pleasant to the taste, and is most easily taken by patients of all ages and with the most delicate digestions.

Havana, March, 1902.

NEWS, NOTES AND ANNOUNCEMENTS.

Dr. Holton Reappointed.—Governor McCullough has reappointed Dr. Henry D. Holton of Brattleboro, member of the State Board of Health for six years. Much satisfaction is felt throughout the State at Dr. Holton's reappointment for it is everywhere recognized that he has had a very important influence in shaping health laws in Vermont. Dr. Holton is one of the leading sanitarians of our country and the high honors he has received at the hands of the American Public Health Association and the American Congress of Tuberculosis amply show the esteem in which he is held. The Governor could have made no more appropriate or popular appointment.

Health Laws Revised.—The last legislature, among other good acts, remodeled and recodified the health laws of Vermont. Every physician is urged to familiarize himself with measures concerning the public health for his own benefit and in order that he may better discharge his professional obligations to the people and the State.

Registration of Tuberculosis Patients.—The attention of the medical profession is called to the following measure passed by the last legislature:

AN ACT REQUIRING PHYSICIANS TO NOTIFY THE STATE BOARD OF HEALTH OF THE EXISTENCE OF ALL CASES OF HUMAN TUBERCULOSIS.

It is hereby enacted by the General Assembly of the State of Vermont:

Section 1. Every physician engaged in the practice of medicine in the state of Vermont shall, immediately upon the passage of this act, submit to the secretary of the state board of health, the names and addresses of all persons under his treatment for tuberculosis and thereafter each case within one week after applying for treatment.

Sec. 2. The secretary of the state board of health shall keep a careful and accurate record of reported cases of tuberculosis, not for publication, but for such purposes as are necessary for the state board of health in the discharge of their duties, and immediately after being notified of each case shall send to the address given a printed circular containing proper information in regard to the disposal of sputum and such other facts, hygienic or otherwise, as are necessary for the welfare of the person afflicted and the protection of the community in which he lives.

Sec. 3. Failure onthe part of a physician to conform to this act will constitute a misdemeanor punishable by a fine of not less than five nor more than fifty dollars or ten days' imprisonment or both.

Sec. 4. This act shall take effect January 1, 1903.

The State Board of Health.—The State Board of Health have organized with Dr. C. S. Caverly of Rutland, president; Dr. H. D. Holton of Brattleboro, secretary; and Dr. T. R. Stiles of St. Johnsbury, treasurer.

The following committees have been appointed: On lighting, heating, ventilation and other sanitary arrangements in public buildings, Dr. Holton; health officers, Dr. Holton; rules and regulations, Dr. Caverly; plumbing regulations, Dr. Caverly; infectious diseases, Dr. Holton; slaughter houses, Dr. Stiles; vital statistics, Dr. Holton; water and ice supplies and sewage disposition, Dr. Stiles; tuberculosis, Dr. Holton; practice of embalming, Dr. Cav-

erly; laboratory, Dr. Stiles; health officers' school, Dr. Caverly; finance, Dr. Stiles; printing, Dr. Caverly.

Fanny Allen Hospital Staff.—The Fanny Allen Hospital authorities have appointed the following attending physicians and surgeons to serve for the ensuing year, beginning January 1, 1903: Physicians, Dr. C. M. Ferrin of Essex Junction, Dr. J. W. Sheehan of Winooski, and Dr. C. A. Pease and Dr. F. E. Clark of this city; surgeons, Dr. D. C. Hawley, Dr. P. E. McSweeney, Dr. J. B. Wheeler and Dr. Lyman Allen of this city; specialist in diseases of the eye, ear and throat, Dr. H. E. Lewis of this city; pathologist, Dr. F. E. Clark of this city. Dr. Clark and Dr. Allen will be the attending physician and surgeon for the first three months.

The following consulting staff has also been appointed: Consulting physicians, Dr. A. P. Grinnell, Dr. H. R. Watkins, Dr. A. T. Arkley and Dr. R. W. Johnson; consulting surgeons, Dr. W. B. Lund, Dr. H. E. Lewis, Dr. H. C. Tinkham and Dr. S. E. Maynard.

The Prevention of Tuberculosis.—The Minister of Public Instruction of France has recently issued an important circular on this subject laying down the new rules for sanitation with the view to preventing the spread of tuberculosis in public schools. The rules are quite stringent going further than any heretofore adopted by other countries. Under these rules no schoolmaster can be employed until he has undergone a medical examination, and no one can be accepted who presents any evidence of pulmonary tuberculosis. Should a master become tuberculous he is to be given leave during the time necessary for treatment, and not allowed to return to work until cured. —*N. Y. Med. Journal.*

Burlington and Chittenden County Clinical Society.—The annual meeting was held at their rooms, 162 College street, Friday, November 28, 1902, at 8.30 P. M. Following was the programme:

The President's Annual Address,
Dr. M. C. Twitchell.
Election of Officers.
Refreshments.

The following officers were elected for the ensuing year:

President—Dr. H. R. Watkins.
Vice-President—Dr. B. H. Stone.
Sec. and Treas.—Dr. C. H. Beecher.
Executive Committee—Dr. C. A. Pease, Dr. W. H. H. Varney and Dr. H. E. Lewis.

Hydrogen Peroxid in Poisoning from Coal Gas.—Hydrogen peroxid ir recommended by *Merck's Archives* in the treatment of coal gas poisoning, administered per rectum and per os. It is given in doses of two ounces (60.) full strength, per rectum; per os one ounce (30.). This dose may be frequently repeated. The success of the treatment of course depends on the absorption of the oxygen from the solution by the blood current. A piece of ice inserted into the rectum is a great adjuvant and has a remarkable effect in restoring consciousness.—*Jour. of the A. M. A.*

A. Brunet (quoted in *Pediatrics*) claims that erosion of the first lower molar in a patient whose other teeth are healthy, is a valuable pathognomonic sign of hereditary syphilis. The first molar of the second dentition is the only tooth the ossification of which begins in utero.

Neoferrum is a new preparation of Maltopeptonate of iron and of manganse with a minute quantity of arsenic, combined with a very pleasant palatable elixir, with Maltine and sherry wine, neutral in reaction, slightly laxative, and does not injure the teeth. The experienced clinician will at once see where it belongs.

The Vermont Medical Monthly.

A JOURNAL OF REVIEW, REFORM AND PROGRESS IN THE MEDICAL SCIENCES.

H. EDWIN LEWIS, M. D., *Editor.*

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F. S. Hutchinson, M. D. *Enosburg Falls, Vt*

BURLINGTON, VT., December 25, 1902.

EDITORIAL.

TUBERCULOSIS AND THE X-RAY.—The remarkable success of the x-ray treatment in cancer and lupus is becoming more evident every day and there are excellent reasons for believing that an agent has at last been found that is almost a specific for all forms of malignant growths. Reports from all sources are confirming the hopes of the profession and with the development of better technique and more accurate knowledge of the physiologic action of the x-ray on living tissue, one more triumph of science over disease will be recorded.

In a recent paper[1] Dr. J. E. Stubbert of New York, has the following to say on this subject:

"It is now a demonstrated fact that the x-rays are a specific form of treatment in external tuberculosis as well as carcinoma. In the writer's hands both external carcinomatous and tuberculous growths have been thoroughly inhibited. It is impossible to state at the present time whether the results obtained by different observers in this direction will be more permanent than surgical interference, but there is strong reason to believe that they will. The treatment of internal disease, whether of carcinomatous or tuberculous character, has not been as well demonstrated as that of the external variety, but from the present indications it is to be hoped that very many cases of both of these diseases can be radically cured. The question before the profession at the present time is whether the x-rays lose any of their power in passing from healthy tissue to diseased tissue; or whether sufficient force and penetration can be employed on internal disease without destroying the intervening healthy tissue? If this can be accomplished we have no reason to doubt that in the x-rays we will shortly have our most potent agent in the treatment of pulmonary tuberculosis. Satisfactory results have been obtained in the treatment of internal carcinoma, and as the effect of the x-rays on external tuberculosis is so radical, reasoning from analogy, it should be as effective in internal tuberculosis as well as in carcinoma, provided the tuberculous process be sufficiently circumscribed or localized. In carcinomatous conditions of the uterus and in external tuberculosis or lupus, the writer has seen neuralgic pains disappear immediately, the secretion suppressed within a very short time, and the activity of the disease inhibited. Let us hope, therefore, that before long we shall be able to obtain as successful results in the treatment of internal tuberculosis. The technic of x-ray treatment should be carefully observed. The tube should be placed about 8 inches from the surface of the body and all areas not to be acted on should be protected by sheet lead and absorbent cotton soaked with water. The skin should not be too rapidly tanned or x-ray burned, and in treating the lungs it would be well to alternate the points of exposure. Vaselin can be rubbed on the surface at night. Exposures should be of ten to twenty minutes' duration and repeated three or four times a week. The mucous membranes are more tolerant of the x-rays than the skin. Possibly the x-rays may have an inhibiting if not a resolvent effect on tuberculous infiltration or consolidation without cavities."

—[1]Journal of the A. M. A. page 1242.

Dr. Stubbert is so well and favorably known and his experience is so extensive that any statement from him is of more than ordinary interest.

RECIPROCITY IN STATE MEDICAL LICENSES.—We have had occasion to mention before in these columns the advisability of interstate reciprocity in the matter of state licenses to practice medicine. Proper steps in this direction will tend to make a more uniform standard of requirement throughout the United States and incidentally raise the standard of medical ed-

ucation. It would seem that a National Board of Examiners, whose certificate would admit to practice in any State in the Union, is the best plan thus far offered. But in the absence of such a National Board, the next best thing is to give State Licensing Boards power to license physicians who have qualified in other states having requirements equivalent in character.

Vermont has taken this progressive step and the following enactment passed at the last legislature explains itself:

AN ACT IN AMENDMENT OF SEC. 4633 OF CHAPTER 190 OF THE VERMONT STATUTES, RELATING TO THE PRACTICE OF MEDICINE AND SURGERY.

It is hereby enacted by the General Assembly of the State of Vermont:

SECTION 1. Section 4633 of the Vermont Statutes is hereby amended so as to read as follows:

Section 4633. Each board of censors shall issue certificates to physicians and surgeons who personally present to such board a diploma from a medical college or university, and who also by examination satisfy said board of censors that they are qualified to practice the branches mentioned in said diploma; and to such physicians and surgeons, without examination, who shall personally appear and present a certified copy of certificate of registration or license, which has been issued to said applicant in another state of the Union, where the requirements for registration shall be deemed by said board to be equivalent to those of this state; provided such state shall accord a like privilege to holders of certificates from a board of censors of this state.

SEC. 2. Each applicant for such examination or certificate shall pay to said board of censors the sum of five dollars.

SEC. 3. All acts or parts of acts inconsistent with this act are hereby repealed.

SEC. 4. This act shall take effect from its passage.

THE PASSING OF 1902.—In a very few days 1902 will be no more and this year which has been so full of great events will belong to history. To the VERMONT MEDICAL MONTHLY the year 1902 has been the most important in the eight full years it has been published. A larger amount of original matter has been printed than ever before, and we are egotistical enough to believe that the MONTHLY compares favorably with any other local medical journal in the country in make-up, appearance and the character of its contents. We do not make this statement in a boastful spirit, but simply to show that we appreciate that the VERMONT MEDICAL MONTHLY has established a high standard and that in the next and future years to equal our present standing, we must do as well or better than ever before.

This is our promise to our readers: The VERMONT MEDICAL MONTHLY cannot afford to retrogress in any paticular and what has been accomplished in 1902 is an assurance for what will be accomplished in 1903. We do not assume to be anything but a local journal, but we do aspire to be one of the best, if not *the* best local medical monthly in the whole United States. This seems to be an honest ambition and we can achieve it if fortune smiles on us as brightly in 1903 as it has in 1902.

EDITORIAL NOTES AND CLIPPINGS.

KILLING PEOPLE BY TELLING BRUTAL TRUTHS.—Many people are killed by brutal truths. Some physicians are so conscientious, and so tactless, that they think they must tell patients the whole truth when they believe they cannot recover, instead of giving them the benefit of the doubt, for every physician knows that nearly always there is a doubt which way the case will turn. Cheerful encouragement has saved many a life by helping it to pass a crisis favorably when the actual truth might have killed the patient or reduced his rallying powers to the danger-point.—*Success.*

This statement is so true and sententious that we reprint it with real pleasure. Many a patient has been doomed to a fate compared with

which the sword of Damocles was a sinecure, by the senseless statement of a tactless doctor setting a time limit on his life. It is never wise nor necessary for a physician to tell a patient the worst, however certain, and he can always protect his professional reputation by communicating his fears to some member of the family. Then again it is always a dangerous practice to predict a patient's demise until he is really dead, for oftentimes those whose lives are most despaired of get well and live the longest. To assure a patient's recovery and have him die, always casts a shadow on a doctor's judgment, but it is never so embarrassing as to meet a patient day after day, and year in and year out, whom you have said "could not live a month." It always gives such patients unlimited satisfaction to feel that they still live "in spite of the doctor."

We are a Nation of Smokers.—The internal revenue report, just out, shows last year 15,252 establishments in the United States turned out 9,500,000,000 cigars and cigarettes, or 118 for each man, woman and child in the country. Of this total there were 6,050,000,000 cigars and 3,450,000,000 cigarettes. The report coldly explains this enormous growth of the use of tobacco to be due to the possibility of gratifying, through the small and cheap cigar now turned out by machinery, the American demand for a short, inexpensive smoke, producing immediate effects. The cigarette is made from an especially mild tobacco and the consumer almost invariably inhales the smoke, which comes in contact with the delicate membranes of the respiratory tract. In this way the active principle of the tobacco is taken quickly into the circulation, producing immediate physiological results.—*Burlington News.*

MEDICAL ABSTRACTS.

Give Him Air; He'll Straight be Well.—In view of the award to Dr. Arthur Latham of the first prize of £500 for his essay in regard to the proposed King Edward's Sanatorium for Tuberculosis some interest attaches to an address delivered a few months ago before the Hunterian Society of St. George's Hospital, London, Eng., by the successful competitor, on the Modern Treatment of Pulmonary Consumption. In it Dr. Latham throws well-deserved scorn upon the treatment which has been so often meted out to unfortunate sufferers from this disease, a treatment by the way, which can even at the present be found in full swing in the out-patient departments of many a hospital, even of special consumption hospitals, where, if anywhere, one would expect to meet with better things. "It is not an uncommon experience," he says, "to find some unfortunate workman, who lives continuously in a fetid atmosphere and eats an indifferent amount of coarse and unnutritious food, taking all the following medicines during the twenty-four hours: A mixture of cod-liver oil with malt, to supply, so it is said, the place of the fast-ebbing vital oil; a mixture of gentian and sodium bicarbonate, to assist the jaded appetite! an ether mixture to strengthen the action of the heart when the patient feels more than usually ill; some form of lozenge to allay the cough during the daytime, together with a new-fangled antiseptic as an inhalation; and some pernicious preparation of opium to bring sleep at night." It is one of our amiable weaknesses to hold patent medicines in ridicule and contempt, but what could be more ridiculous, considering the teachings of the dead-house, than the current treatment of consumption so aptly described by Dr. Latham—a mere pouring in of drugs without any attempt to touch the root of the disease. Yet in the midst of all this drugging, going on far longer than we can remember, there have been men who saw the truth. So far back as 1840, George

Bodington insisted on the importance of a generous diet and a constant supply of pure air, and propounded the terrible heresy that "cold is never too intense for a consumptive patient." In 1855 Dr. Henry MacCormac, the father of the late Sir William MacCormac, published a book on somewhat similar lines, and in 1861 read a paper before the Royal Medical and Chirurgical Society in which he advocated what are now established principles. Yet what was the treatment which these pioneers received at the hands of their professional colleagues? Bodington's book, says Latham, "met with much bitter and fierce opposition, and eventually the disapproval of his methods became so universal that patients were driven from his sanatorium," while "the members of the Royal Medical and Chirurgical Society refused to pass the usual vote of thanks to Dr. MacCormac, because they thought that the paper was written by a monomaniac."

The position taken up by the medical profession in regard to the treatment of consumption has indeed been most deplorable, and has thrown into strong light the bar sinister which hangs over the origin of medicine—a science, if it be a science, springing in the far past from mystery and witchcraft, tainted with the methods of the sorcerer, and even now dominated by that overmastering faith in drugs and nostrums which is the direct and disastrous heritage handed down to us by our immediate ancestors, the apothecaries. It has been an ignoble spectacle; no one taking a broad view; each man limited by his education and trudging along in the rut of his old habits—physicians pouring in drugs, surgeons scraping out bits of diseased tissue, while even now, in the full light of bacteriological science, we find men attempting to cure consumption by soaking the patient's tissues with antiseptics; and all this in defiance of the teachings of pathology, which go to show how frequently the disease gets well if the patient's vitality, the *vis medicatrix naturae*, is but given a fair chance. Yet, how near we were to the truth if we would but have listened, if we would cut ourselves adrift from the prejudices ingrained in us by our education, and, in the words of one grea man, have thrown "physic to the dogs," and in those of another, have investigated all things by "observation and experiment." Once a year we have met together to do honor to the immortal Harvey, and then we have returned to this miserable drug-giving as if Harvey had never existed. Meanwhile, notwithstanding our ostracism of new ideas, the teachings of Bodington, of MacCormac, and of the modern host of sanatorium owners has prevailed; and now, at last, in the full sunshine of royal patronage, we admit how simple is the truth, expressed as it is by the motto of Dr. Latham's essay: "Give him air; he'll straight be well." What sycophants we all are! It is high time that, as a profession, we sang a litany, "From the thraldom of dogma and the limitations of the physic bottle, Good Lord deliver us."—"The Hospital."

Acid-proof Bacilli in Non-Tuberculous Sputum.—Several observers have found in the sputum from cases with pulmonary lesions, bacilli which are acid-proof and which closely resemble the tubercle bacillus on superficial examination. A. P. Ohlmacher has reported finding an acid-resisting bacillus, which was at first mistaken for the tubercle bacillus, in the sputum from a case exhibiting certain clinical evidences of phthisis. He is of the opinion that the organism was identical with those described by Fraenkel, Pappenheim and Rabinowitsch in association with pulmonary gangrene. Lichtenstein has also recently presented before the Berlin Society of Internal Medicine, a case in the sputum of which acid-proof bacilli were found. They were first mistaken for tubercle bacilli. The patient had had hemoptysis. Herr has shown that acid-proof bacilli are widely distributed, not only

upon grass and in cow's dung, but also in the dust from hay and in the soil of fields. In view of the fact that these acid-proof bacilli are so common in the external world, it would not be surprising if they should sometimes gain entrance to sputum or even be inhaled. That they may sometimes find favorable conditions for multiplication in the exudate in diseased lungs, in bronchial secretions, and in sputum is not unlikely. Some of these bacilli stain exactly like the tubercle bacillus, and to mistake them for the latter is excusable. In examining sputum for tubercle bacilli these facts are to be remembered, and thus something more complicated is introduced into what has usually been considered one of the most simple and accurate means of diagnosis.—*Jour. of A. M. A.*

STRAY THOUGHTS.

For this is my kingdom: My peace with my neighbor,
The clasp of a hand or the warmth of a smile,
The sweetness of toil as the fruit of my labor,—
The glad joy of living and working the while;
The birds and the flowers, and the blue skies above me,
The green of the meadows, the gold of the grain;
A song in the evening, a dear heart to love me,—
And just enough pleasure to balance the pain.
—*William Chandler Bagley in Harper's for Nov.*, 1902.

What is the soul?
It is that thing within a man
That makes him turn his face from mundane spheres,
And standing 'neath the shimmer of the stars,
Or in the golden sheen of noon-day sun,
To wonder whence he came, the reason for
His being, and—whither he will go!

And when the fleeting cycle of his years
Brings him in turn beside the open graves
Of those he loved, and each are laid away,
That thing within himself that makes him cry,
"O God, Death cannot be the end. Somewhere
Beyond the grave they watch and wait for me."
That—that is the soul!
Ah yes, that thing which gives men hope and love,
That is the soul!—*H. Edwin Lewis in Doctors Magazine.*

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Extract from "Treatment of Diphtheria," by Dr. J. W. Pearce, in *American Practitioner and News*, July 15th, 1902.

"To briefly relate, this is the way I treat diphtheria, and I have never lost a case. If I can get perfectly fresh antitoxine I give it, but if it can not be had perfectly fresh I do not. Whether antitoxine is given or not, I give ecthol in full doses appropriate for the age of the patient, every three hours, administered by the mouth. The entire fauces, larynx, and pharynx are sprayed with a mixture of ecthol and peroxide of hydrogen, three parts of the former to one of the latter, every fifteen to thirty minutes. Calomel in small doses is administered every hour until the bowels are thoroughly moved. Nourishing and supportive diet is given at short, regular intervals, and everything done to make the patient comfortable in the way of supplying fresh air, etc. I have been using this plan, modifying it to suit the needs of each individual case, for several years, and cannot recommend it in too glowing terms to my fellow practitioners, knowing that it will give good results and entire satisfaction if it is carefully and effectively administered and carried out. Nothing can save a patient in articulo mortis, and it is needless to try this in such cases hoping to do something."

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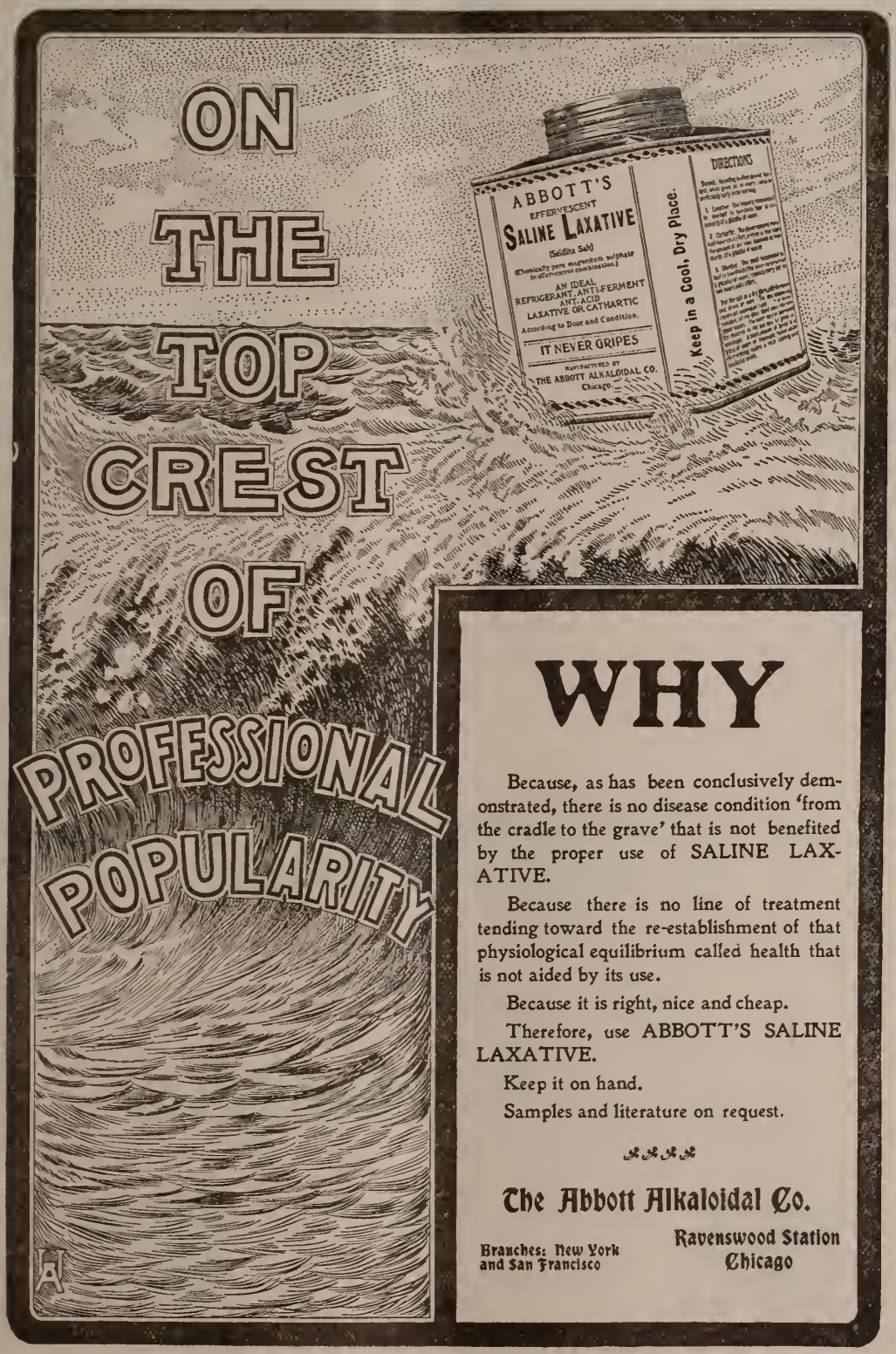

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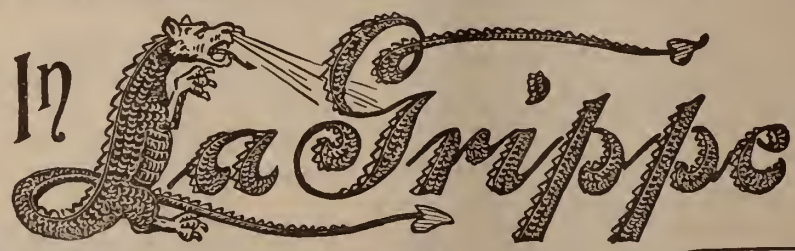

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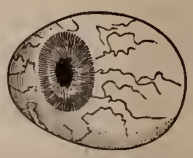

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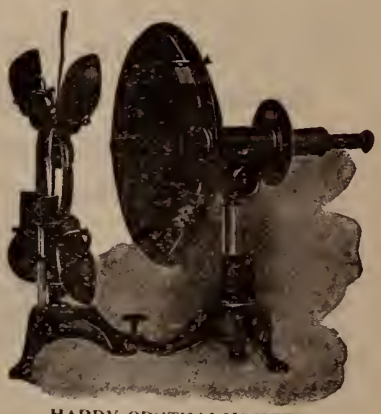

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NOTES.—Glyco-Heroin-(Smith) is a dark amber liquid, perfectly clear, and has the density of C. P. Glycerine.

Its odor and flavor is peculiarly aromatic and agreeable.

Its taste is aromatic sweet, with just a shade of bitter.

The size of package supplied to the druggist for dispensing purposes is sixteen ounces.

The quantity ordinarily prescribed by the physician is three or four ounces

Physicians are solicited to write for samples of Glyco-Heroin-(Smith) that they may investigate and observe the exceptional efficacy of this preparation.

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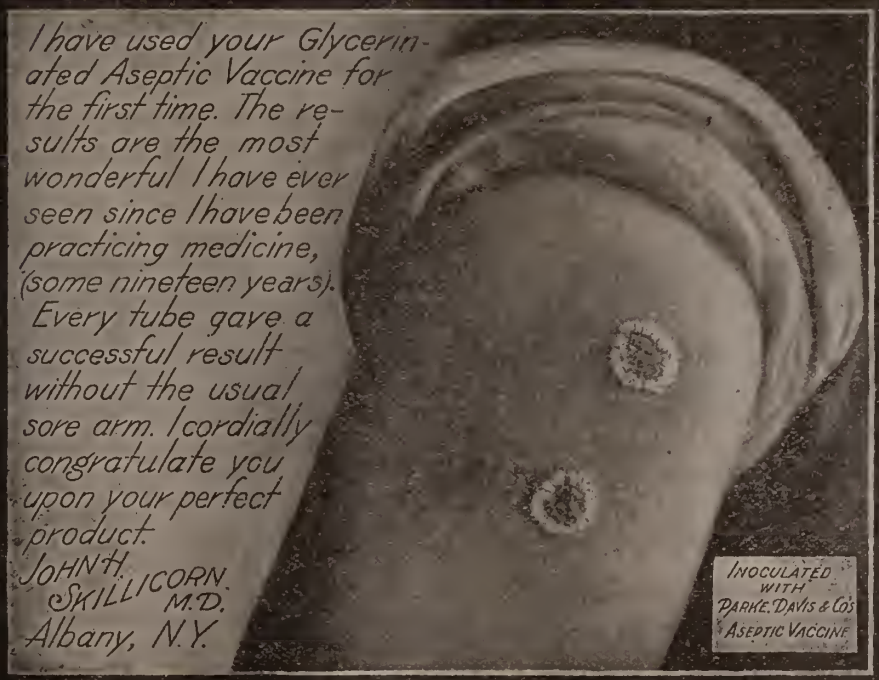

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Frequent urination, tenesmus, hypogastric pain and a temperature of 101.4 degrees.

The urine was scanty, turbid and loaded with mucus.

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Treatment consisted of rest in bed, restricted diet, anodynes for the tenesmus, diluent and alkaline drinks.

The acute symptoms promptly subsided, but the urine continued abnormal despite the general measures employed and the internal administration of urinary antiseptics.

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Repeated examination with the sound gave negative results, but a skiograph taken with a high vacuum hard tube, revealed a small calculus which had persistently evaded the sound in previous examinations.

Lithotomy was performed and the calculus removed, but the urine failed to return to normal.

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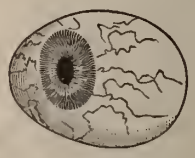

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NOTES.—Glyco-Heroin-(Smith) is a dark amber liquid, perfectly clear, and has the density of C. P. Glycerine.
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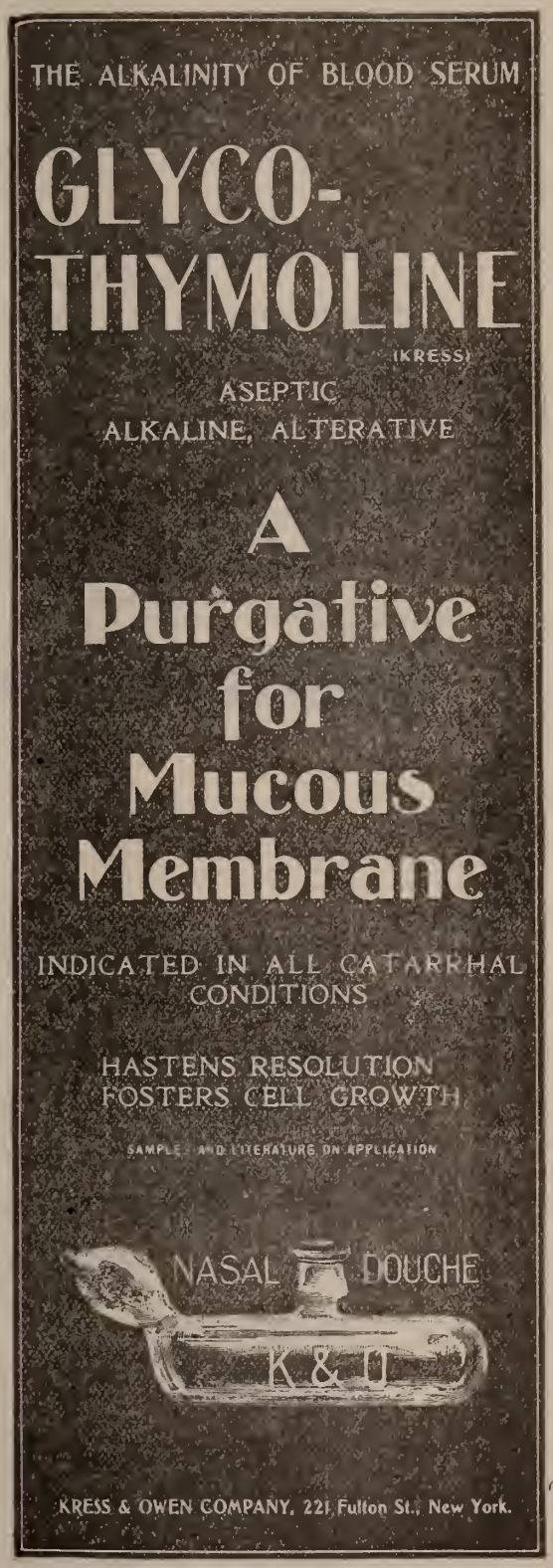

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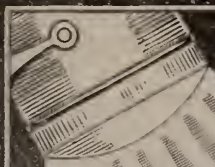

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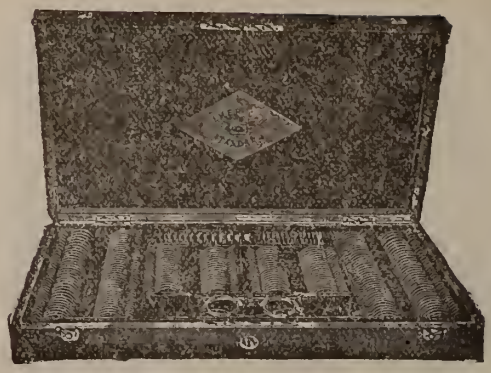

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tion alike, whenever the uterine cavity becomes the source of septic intoxication.—*Indian Lancet.*

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"Esbildet ein Talent sich in der Stille,
Doch ein Character in dem Strom der Welt."
—*Goethe.*

'Tis in the single presence of one's self,
Apart from men and all the busy world,
Where discords, strifes and all desires for gain
Are laid aside for higher, nobler thoughts,
That talents thrive and reach their greatest worth.

But character develops far the best
When tossed upon a sea of human souls,
Where men meet men,—then part to meet no more,
But carry with them to the end of life
The products of an interchange of thought.
Ay, further still, for things which have the pow'r
To thus affect the tenor of this life,
Must needs concern our future in the next.
—*H. Edwin Lewis.*

"No stream from its source
Flows seaward how lonely soever its course,
But what some land is gladdened. No star
Ever rose and set without influence somewhere."
—*Owen Meredith.*

PROGRESS.

Let there be many windows to your soul,
That all the glory of the universe
May beautify it. Not the narrow pane
Of one poor creed can catch the radiant rays
That shine from countless sources. Tear away
The blinds of superstition; let the light
Pour through fair windows broad as Truth itself
And high as God.

Why should the spirit peer
Through some priest-curtained orifice, and grope
Along dim corridors of doubt, when all
The splendor from unfathomed seas of space
Might bathe it with the golden waves of Love?
Sweep up the debris of decaying faiths;
Sweep down the cobwebs of worn-out beliefs,
And throw your soul wide open to the light
Of Reason and of Knowledge. Tune your ear
To all the worldless music of the stars
And to the voice of Nature, and your heart
Shall turn to truth and goodness, as the plant
Turns to the sun. A thousand unseen hands
Reach down to help you to their peace-crowned heights,
And all the forces of the firmament
Shall fortify your strength. Be not afraid
To thrust aside half-truths and grasp the whole.
Ella Wheeler Wilcox in N. Y. Journal.

ELONGATED UVULA.—An elongated uvula often accompanies chronic pharyngitis. If on inspection the uvula appears long and flabby, with its tip in contact with the base of the tongue especially if this is the case with the tongue well depressed, it is probably acting as an irritant, and should be shrunk or a portion of it removed. It may be shrunk considerably by touching the whole surface with chromic acid, previously cocainizing. If this sufficies it is all that is necessary ;should the shrinking fail to remedy the trouble, amputation of a portion is indicated. This should be done with the scissors or knife, and not with the galvano-cautery.

Cocainize the uvula thoroughly so as to lessen both the pain and the convulsive action of the azygos muscle. Carefully estimate how much it is desired to remove, and never remove the whole, but only the redundant portion; from one-quarter to three-eighths of an inch should always be left. When possible have the patient hold the tongue depressor. Grasp the tip of the uvula with a long pair of forceps, but without putting the whole uvula on the stretch; with a sharp knife, or better, with scissors, and preferably serrated-edge scissors, cut on the bias from below upwards, so as to leave the raw edge towards the pharynx. Do not make the cut except when the uvula is at rest, and not especially on the stretch, as otherwise there is danger of removing too much. There is no after-treatment required. It is very sore for a few days, and a week will be required for complete healing. —*Internat. Jour. Surgery.*

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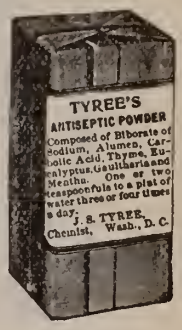

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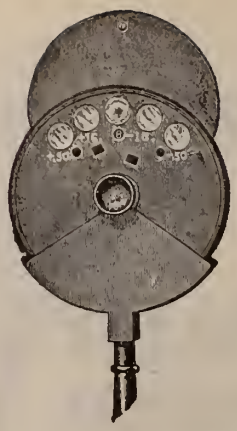

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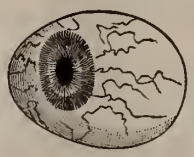

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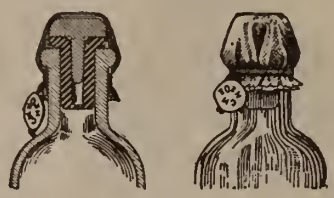

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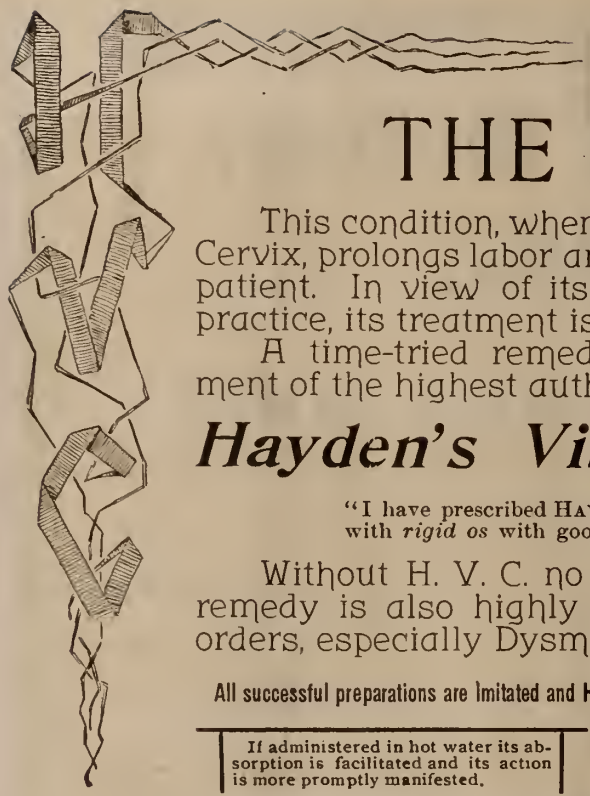

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Improve and educate yourself in every way, that you may enter into his pursuits; and keep pace with the times, that he may not weary of you.

Be prepared to follow him at an hour's notice and rough it like a man.

Do not try to hide your affection for him, but let him see it and feel it in every action. Never refuse him anything he asks. Observe a certain amount of reserve and delicacy before him. Keep up the honeymoon romance, whether at home or in the desert. At the same time, do not make prudish bothers, which only disgust, and are not true modesty. Do not make the mistake of neglecting your personal appearance, but try to look well and dress well to please his eye.

Never permit anyone to tell you anything about him, especially of his conduct with regard to other women. Never hurt his feelings by a rude remark or jest. Never answer when he finds fault, and never reproach him when he is in the wrong, *especially when he tells you of it;* nor take advantage of it when you are angry; and always keep his heart up when he has made a failure.

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Do not bother him with religious talk; be religious yourself and give a good example, take life seriously and earnestly, pray for and procure prayers for him, and do all you can for him without his knowing it. Let your life be something that will win mercy from God for him.

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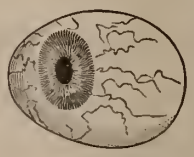

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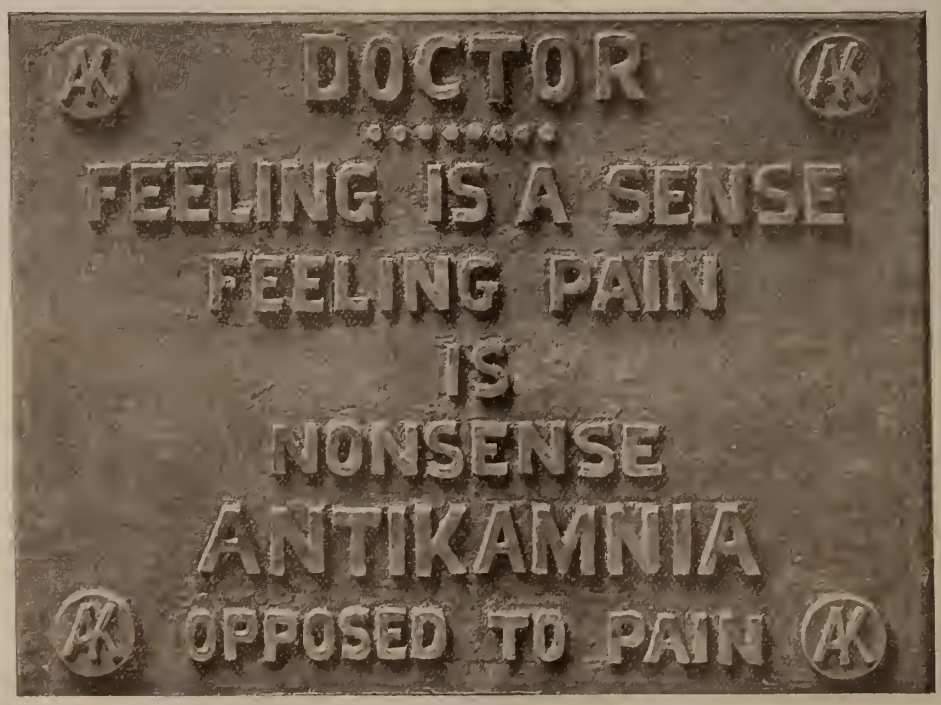

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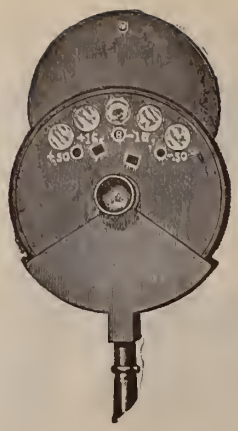

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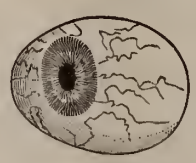

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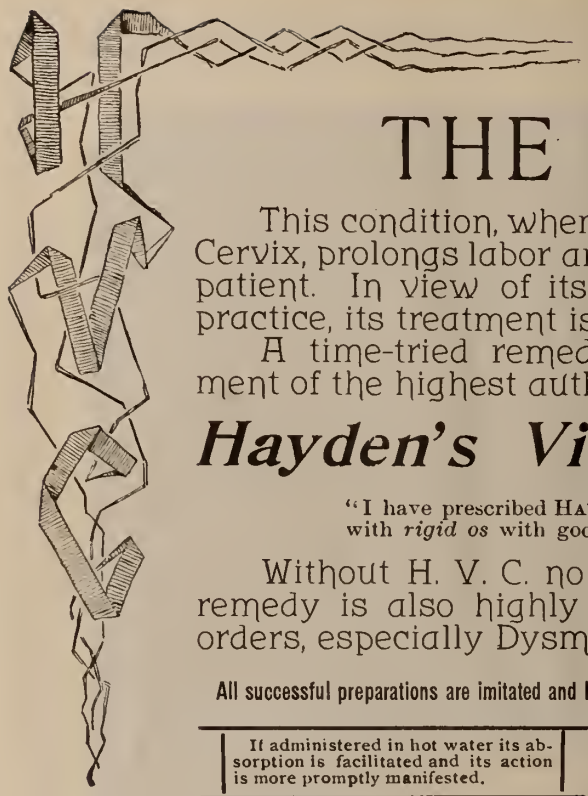

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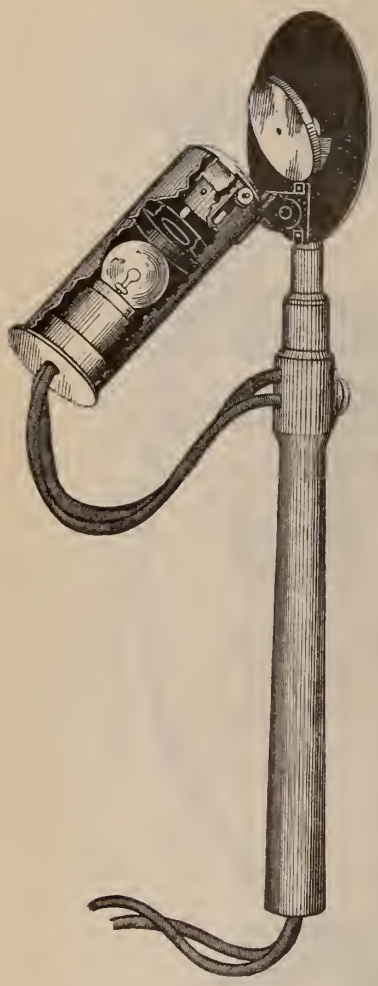

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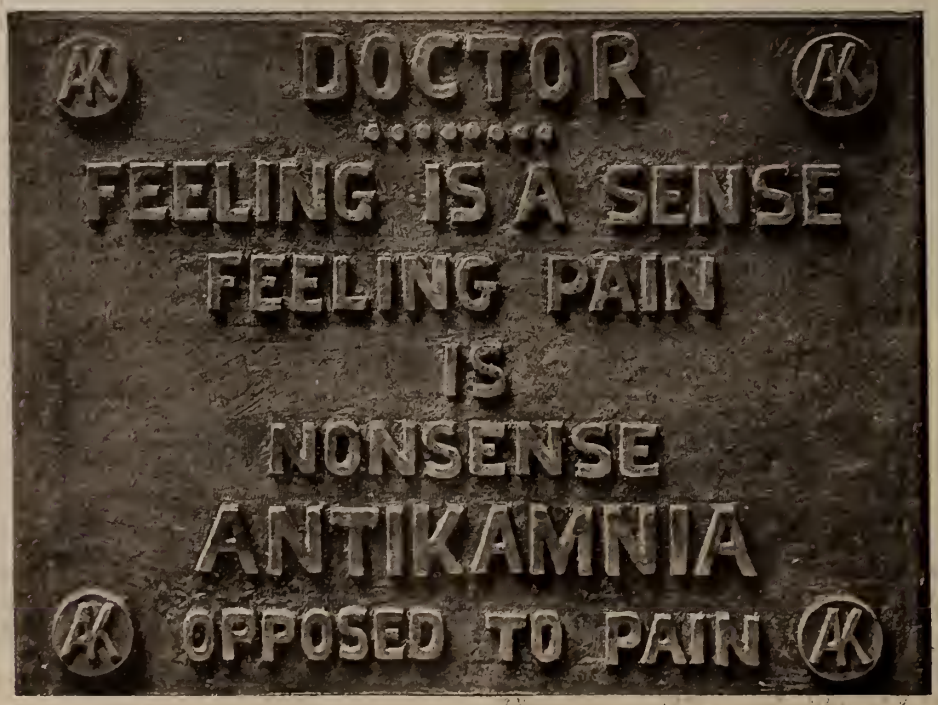

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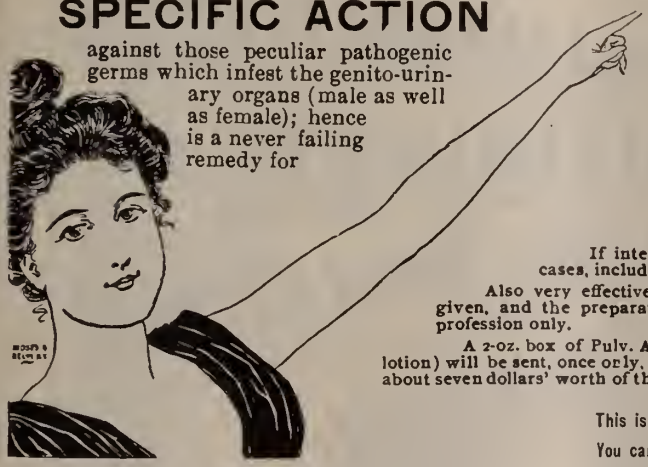

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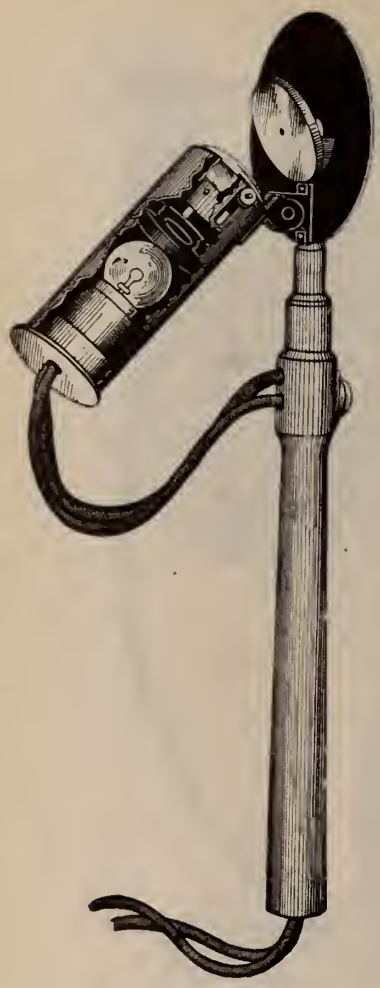

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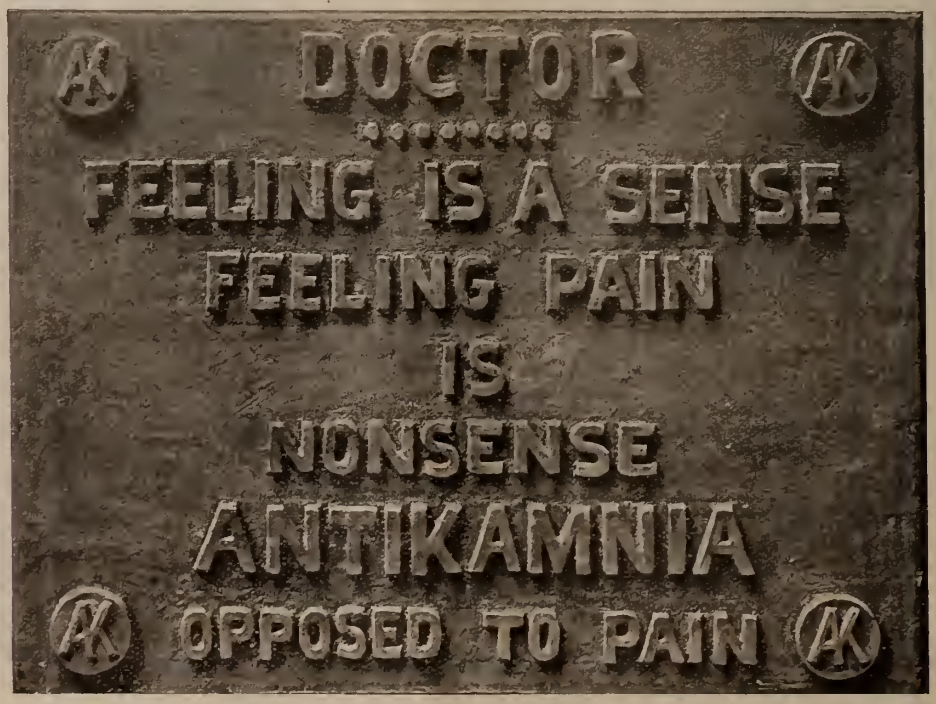

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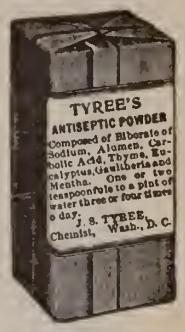

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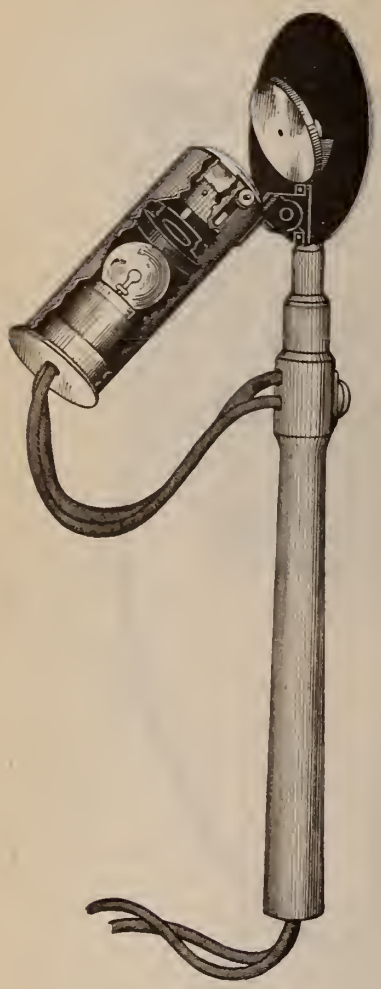

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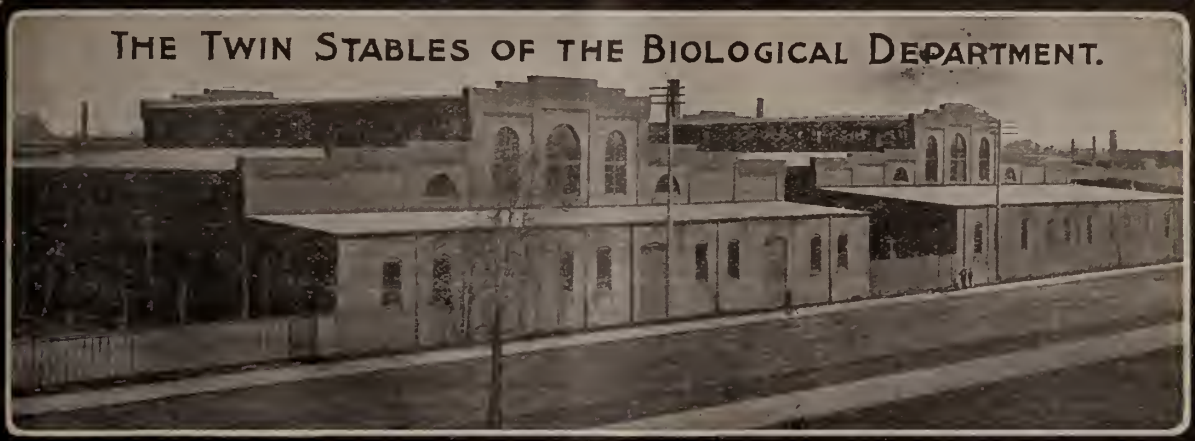

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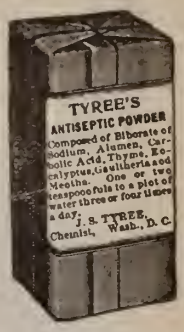

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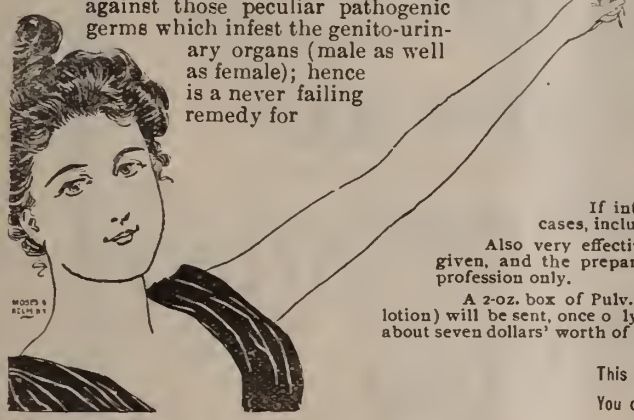

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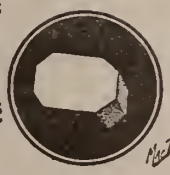

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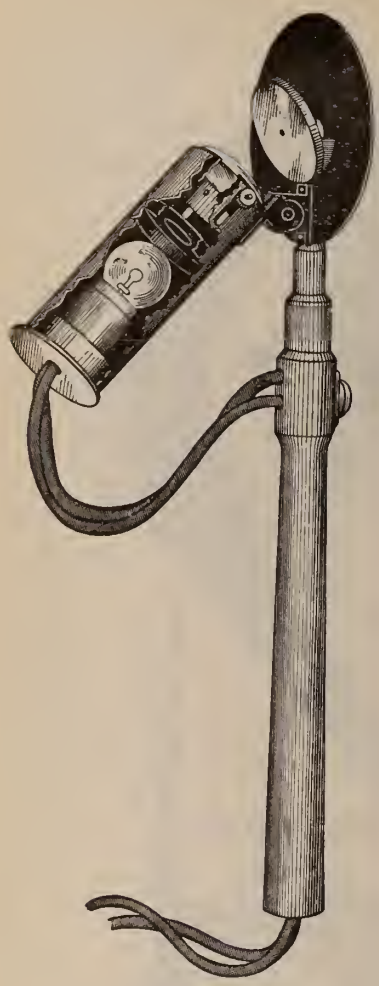

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(Hot Water)
Sig.: Repeat every twenty minutes until relieved.
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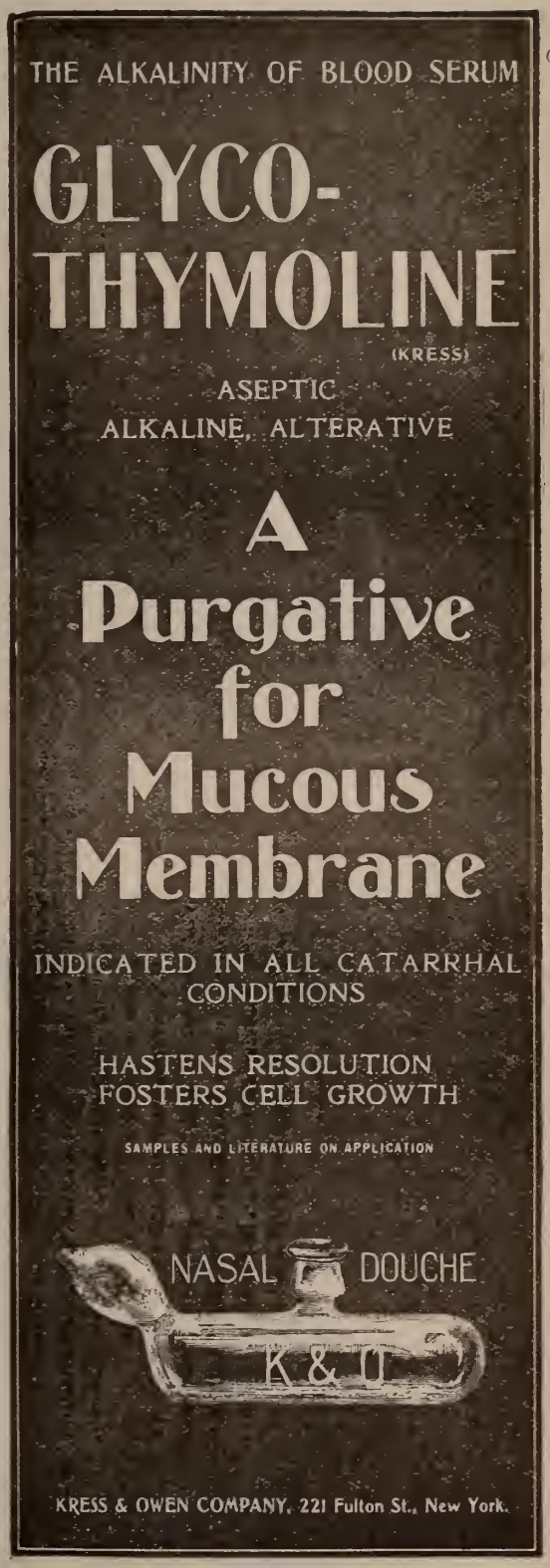

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Leucorrhœa.—Leucorrhœa is one trouble that very few women escape, especially between the ages of twelve and forty-five, and is often the forerunner of very grave troubles unless properly attended to. A great many females have a false modesty which prevents them from appealing to the physician for relief when anything is wrong with their genito-urinary tract, and until they are taught better they will be sufferers. As an illustration of such conditions Prof. Converse, of the Hospital College of Medicine, reports the case of Miss A. M., aged twenty-six, a sufferer from a discharge from the vagina since sixteen years of age, which was very irritating to the parts, so much so that she even when engaged to be married would not appeal to a physician for relief but broke the engagement. At last she was prevailed upon to seek medical relief. A profuse discharge was found, with all the parts excoriated and eczematous. The vagina was hyper-sensitive and the uterus by palpation very painful. Her menses were regular and caused very little pain except that for a week afterwards the leucorrhœa was more profuse. She was given Tyree's Antiseptic Powder with instructions to use a douche morning and night. After a week's use the discharge diminished when she used it only once a day and in two months she was entirely well. She has since then married. Another case was that of a married woman, who has two children living, who after each period suffered from leucorrhœa for several days. No abnormal changes could be discovered in any parts of the tract. She did not give a history to show that it was gonorrhœal and her husband was free from such troubles. The powder was again used with instructions to use as a douche every morning for three or four days before the time of the expected menses and until the discharge ceased. After using it this way for three consecutive months the fourth menses appeared without being followed by a discharge and she has not been bothered with one since. These cases of leucorrhœa respond very nicely to such treatment and the relief seems to be permanent until again infected from some external source. If the condition is due to malformation or position of the organs these conditions must be corrected before the leucorrhœa will respond to the treatment.—*Medical Herald.*

Ecthol in Scarlet Fever.—By John M. Turk, M. D. Canton, Ga.—I feel called upon to say something plain and practical in regard to the usefulness of ecthol in the above disease. I have used ecthol for one year in an epidemic of scarlet fever, and I must say that it has more than met my most sanguine expectations. It has accomplished more than any agent I have ever used in a practice of forty-three years. Ecthol robs scarlet fever of all the distressing sequels, such as nephritis, ear complications, adenitis, membranous angina, etc., if the remedy is given early enough and as often as every two or three hours, in bad cases, until desquamation is over, then not so often. A great many of my cases were malignant and quite a number ushered in with convulsions. In some of my malignant cases I gave double the prescribed dose. It prevents in a large degree the disintegration of cellular tissue, and will not disappoint any who may use it in scarlet fever.—*New Orleans Med. and Surg. Jour.* May, 1902.

Another Attempt at Substitution.—We are informed that preparations of liquid magnesia are being urged upon physicians and sold to the dispensing chemist under various titles. Many of these preparations are chemically unsafe, while others contain calcined magnesia, triturated or suspended by mucilagenous or glycerine solutions. Chalk and other earthy substances have also been found. The strongest claims made for their adoption is cheapness. Their administration, simply or in combination, is dangerous, certainly with infants, where concretions in the delicate intestinal tract are so readily formed.

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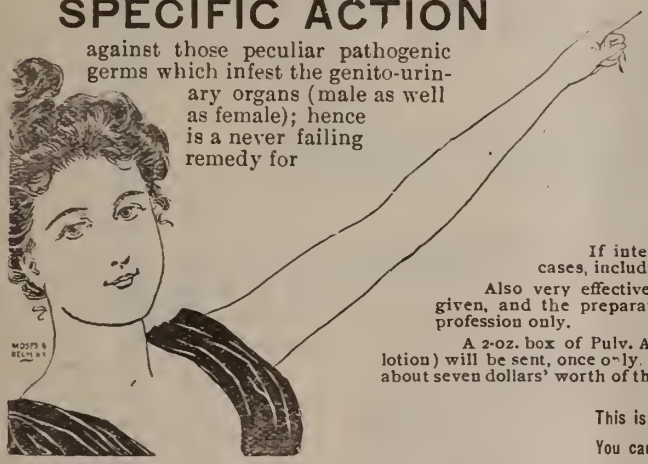

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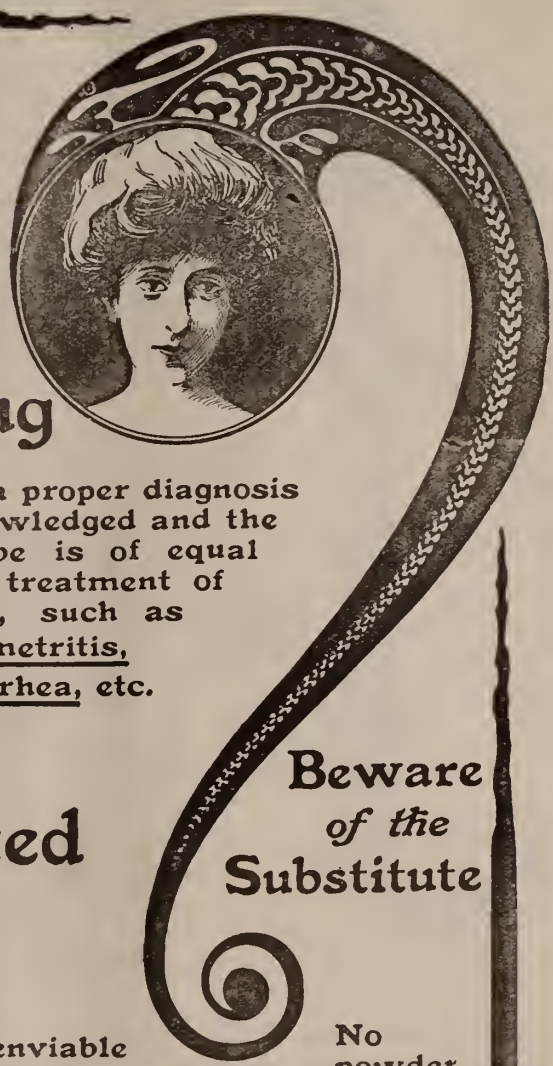

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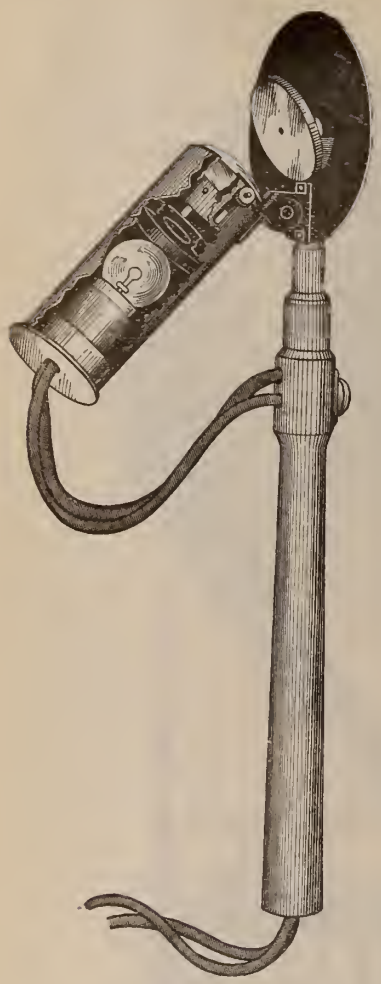

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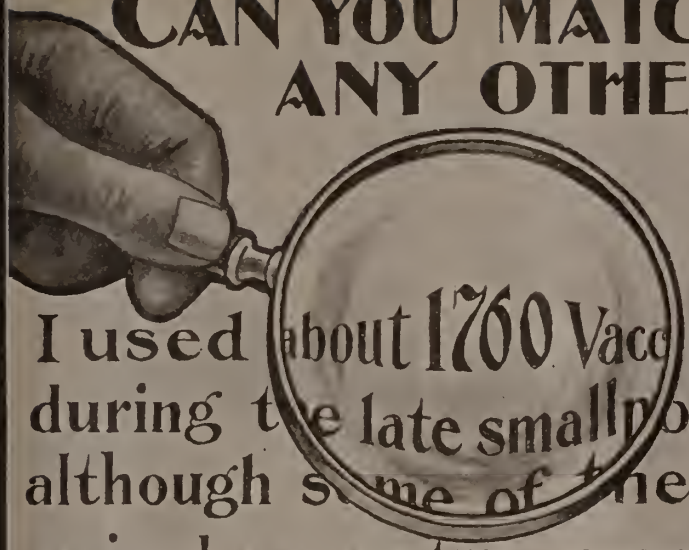

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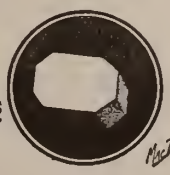

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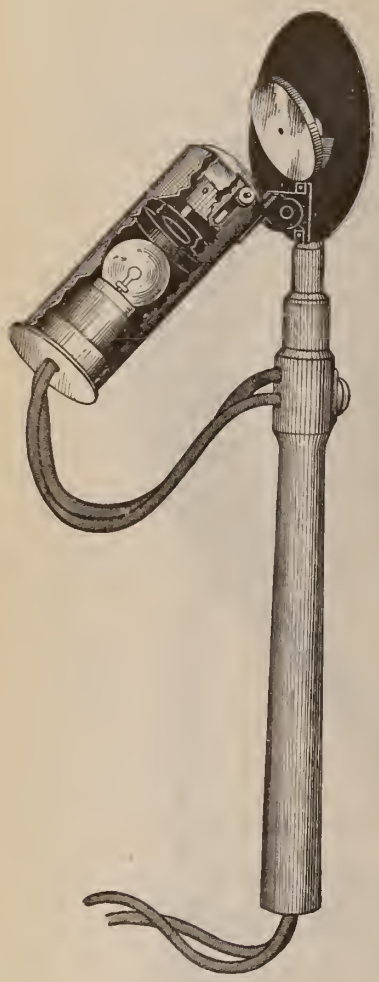

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